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Five Time-Saving Buffers Compared

PUNT, PASS, AND CLICK
Mac Pro Football Is a Winner

PICKING A PROLOG
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Borland software: technically superior

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New! Includes Outlook and MacPlan!

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SideKick: The Desktop Organizer, Release 2.0

Thousands of users already know that SideKick is the most complete and comprehensive collection of desk accessories available.

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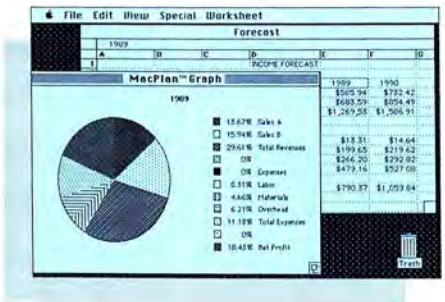

MacPlan does both spreadsheets and business graphs. Paste them into your Outlook files and generate professional reports.

SideKick: The Desktop Organizer, Release 2.0 now includes

- ☑ Outlook: The Outliner
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- ☑ Calculator
- ☑ Report generator
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*Introductory offer expires July 1, 1987

Outlook: The Outliner

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MacPlan: The Spreadsheet

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System requirements:
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MacUser

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Turbo Pascal is already an industry standard in the IBM-compatible world and we're very excited to see Borland International's new commitment to provide this and other modestly-priced, high-quality software for the Macintosh computer.

John Sculley, Apple Computer, Inc."

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VOL. 3, NO. 3 March 1987

MacUser

THE MACINTOSH RESOURCE

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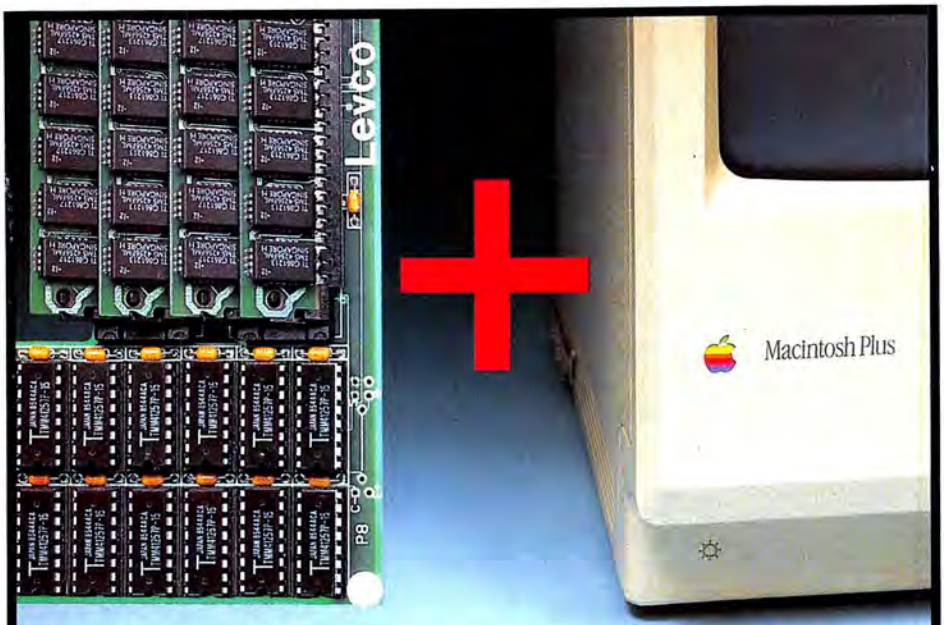
Publisher's Thought for the month:
"Nothing except the mint can make money without advertising." — *Thomas B. Macaulay*



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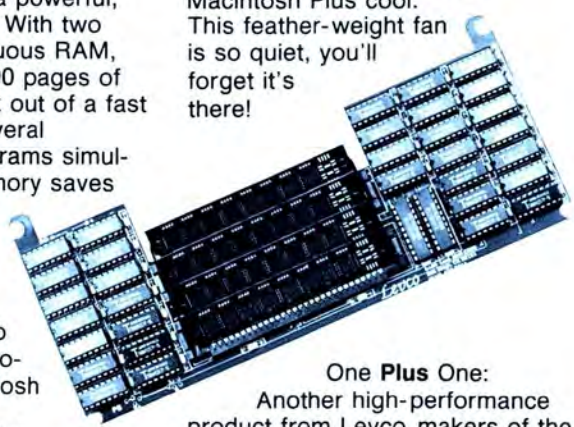

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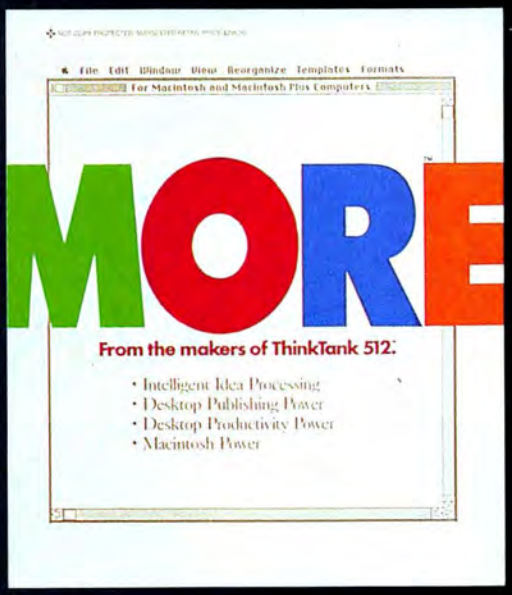

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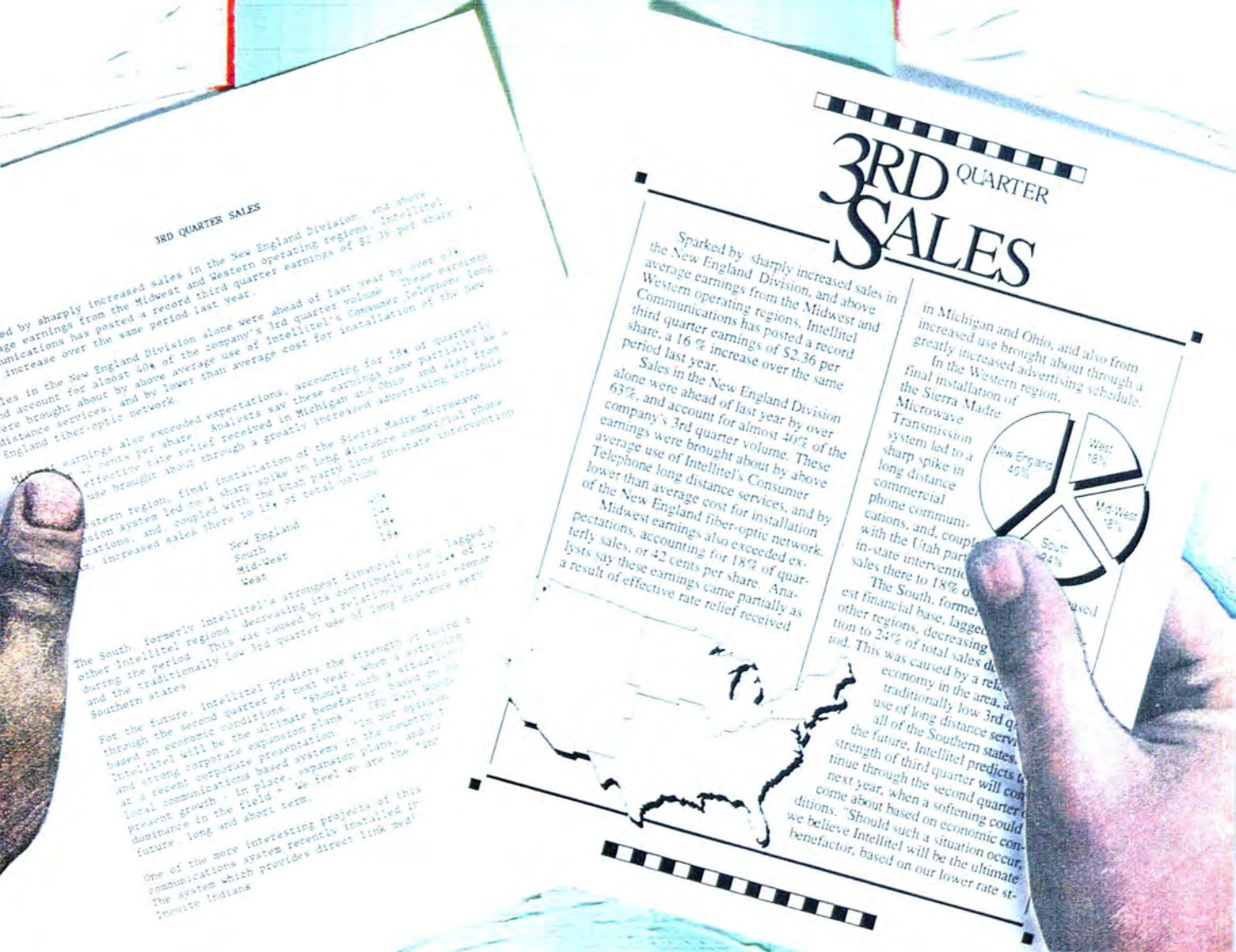

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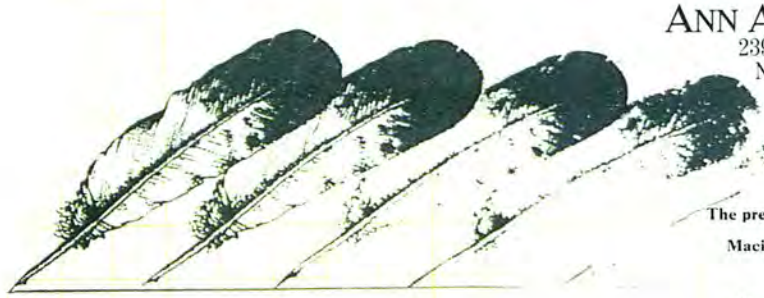

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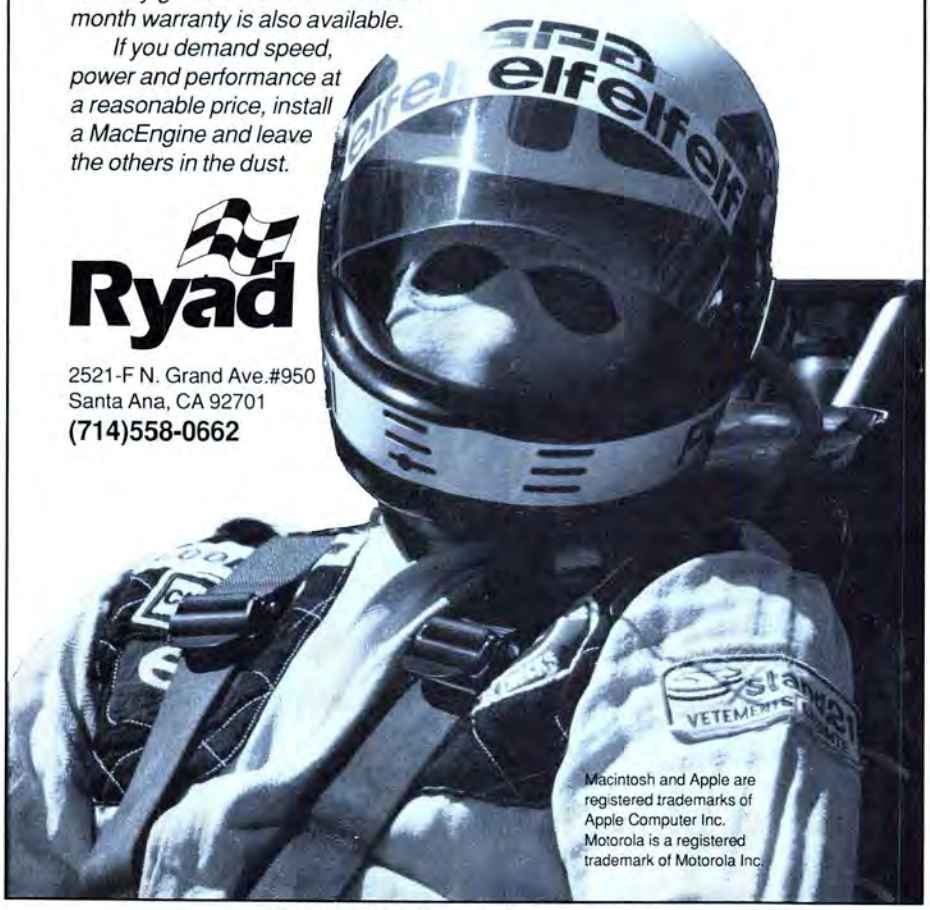

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Trapeze™ is a revolutionary new spreadsheet created especially for the Macintosh.™ It was designed by a spreadsheet user who was tired of the limitations of row and column spreadsheets. He wanted a program that was as easy to use as his Mac. One that would let him do things like organize his spreadsheet model as he went along, and change his model without ruining it. He wanted to be able to define what the spreadsheet would do, rather than have the program define what he could do. He wanted to use logical names, and formulas he could understand. He wanted to see graphics, charts and text on the same page as his spreadsheet data, and to make the output look professional enough to use in presentations. And he wanted to do it all *fast*.

The result is a spreadsheet that is as innovative as the Macintosh. Trapeze is so unique, in fact, that it is being called the next generation spreadsheet. Here's why:

Flexibility–Trapeze doesn't lock you into a grid of rows and columns. Instead, it stores information in blocks. You define the block according to *what* it is, not where it is, and can move it anywhere on the page. That gives you the freedom to do things like add a row without ruining your model. And the unique auto-sizing feature causes blocks to automatically adjust in size when you make additions or changes to your worksheet.

Power–The block format of Trapeze lets you set up worksheets quickly. Even complex models can be created easily, because Trapeze contains over 100 functions and formulas, many of which are unavailable in other spreadsheets. You can create charts which plot thousands of points, and multiple databases allow you to efficiently organize your data for presentation. Trapeze takes full advantage of the power of the Macintosh; in fact, the size of your model is limited only by available memory.

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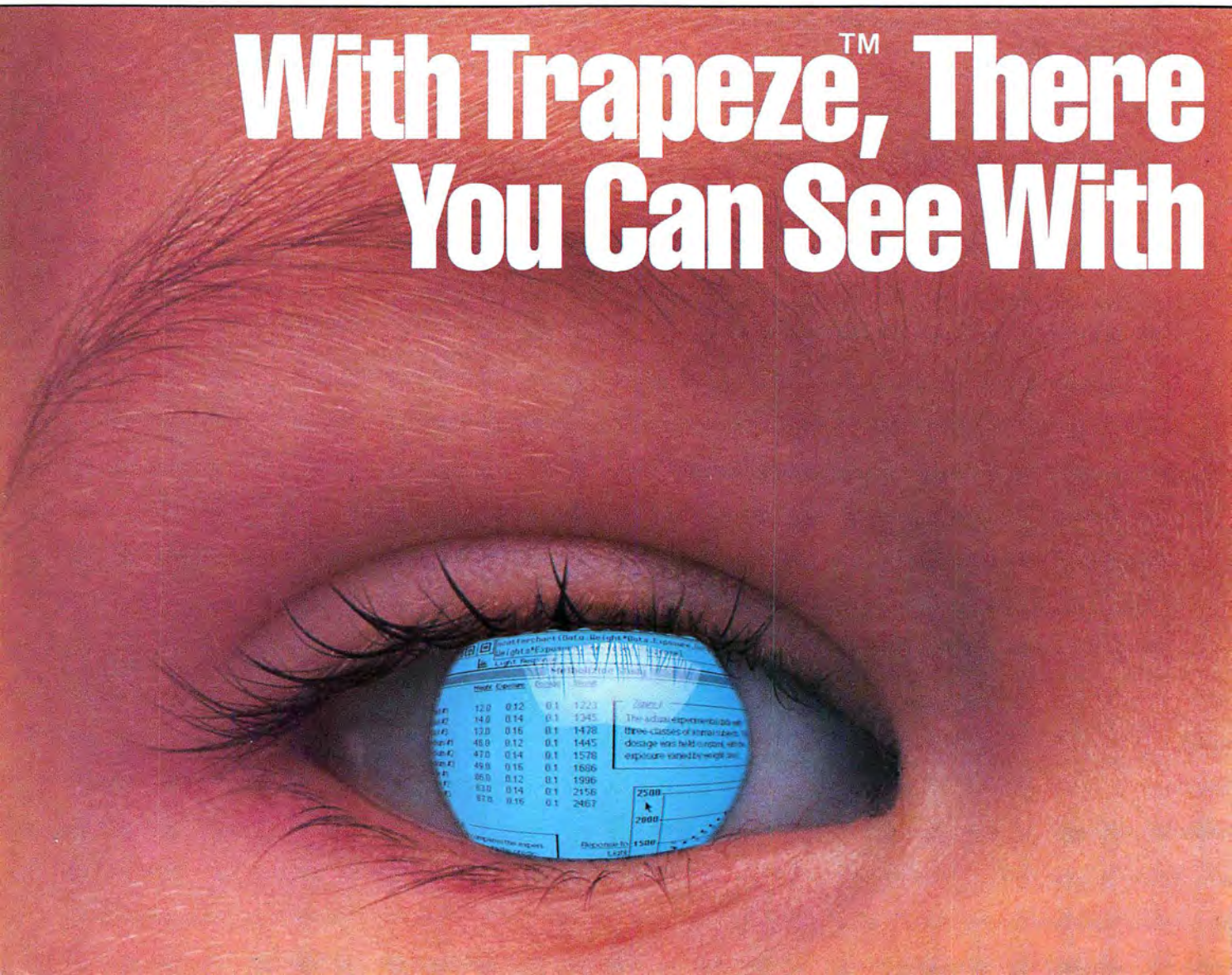

Style–Trapeze lets you use all of the Macintosh fonts, styles, and sizes–even color–in any block. You can create graphs on the same page with your spreadsheet or import graphics from MacPaint,™ forms from MacDraw™ or text from a word processing program. Blocks may contain text, charts, graphics, numbers–virtually anything you need to make your worksheet look good. Since the blocks can be moved around freely, you can lay out your page however you wish. And you can do most of it *without ever touching the keyboard.*

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Trapeze is available now for $295, and comes with a 30-day, money-back guarantee. To order, contact the dealer nearest you or call toll free **1-800-443-1022** today. Once you begin using Trapeze, there's no limit to what you can see.

Minimum system requirements–Macintosh 512K with external drive or enhanced Macintosh 512K. Supports Laserwriter ™ and Imagewriter™ I and II.

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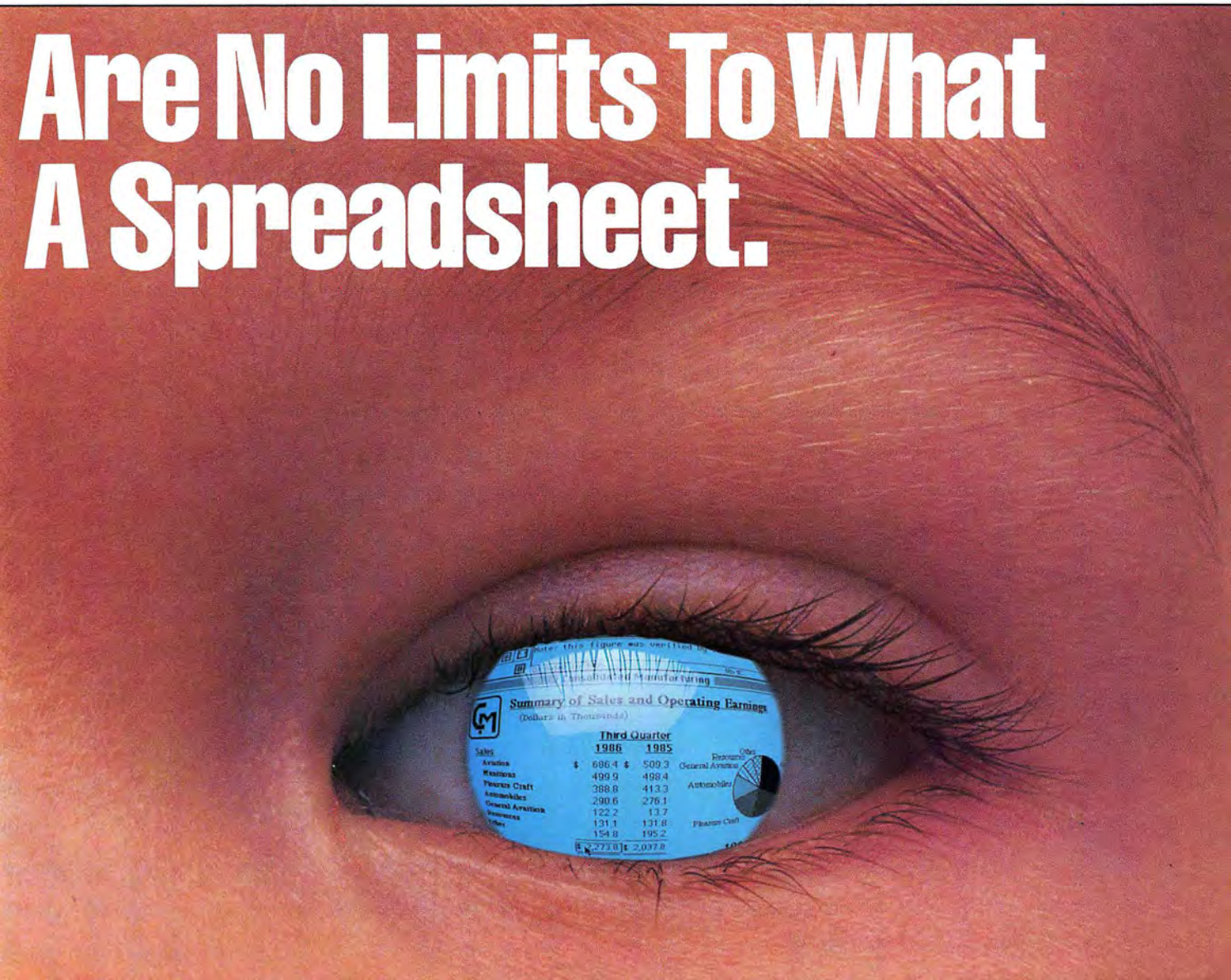

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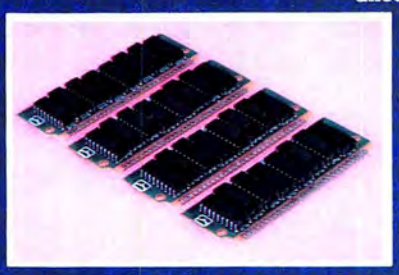

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by Neil L. Shapiro

ONCE MORE, WITH FEELING

I've been in magazine journalism for a long time and some of the magazines that I've worked for have had circulations in the tens of millions (*MacUser* will be there someday too, just as soon as Apple sells enough Macs). So, it was astonishing to me that the editorial I wrote about the need for a Consumer Evangelist at Apple elicited more response than everything else I have ever written all combined. I touched a nerve!

Via telecommunications, U.S. Mail, phone calls and even personal conversations, people have made their views on this topic known to me. Dealers, customers, mail-order fans — they've all told me how they feel. And, at the risk of seeming to "harp" on one subject, I'd like to share with you some of their opinions and some further ideas and thoughts that I've had on this very important issue.

INSTANT REPLAY

Just in case you missed the editorial that generated this controversy, I'll briefly recap the points I made. My feeling is that Apple's dealer network is far from perfect. Indeed, I have personally found myself in the situation of being ripped-off by dealers so often that I now buy most or all of my Apple-related materials via mail-order.

I suggested that Apple Computer (which now has such things as Software Evangelists and User Group Evangelists) make room in Cupertino for a Consumer Evangelist. This new department would be responsible for tracking down complaints of incompetent or dishonest dealers and rectifying the situation.

That's it in a nutshell and here's the reaction.

FROM THE DEALERS

About a dozen dealers have written to me to express their feelings that I have maligned dealerships in general and that they, specifically, feel slighted because they do offer their customers support before and after a sale and even a break on pricing. Almost all have invited me to visit their stores and would, I suppose, like to see me mention them as the Good Guys in print.

Well, first I don't have time to visit all over the country checking out computer stores. But, most important, I don't think that the original editorial should have been taken as a blanket condemnation of dealers. I will be the first to say that there are very likely excellent dealerships that sell Apple brand computers.

I would define as excellent dealers those that meet these criteria: They sell only what the customer needs and never just what's the most expensive. Such dealers train themselves and their personnel to at least an advanced level of usage of the more popular software and hardware packages. These dealers are willing to answer questions in depth and are not ashamed to first say they don't know an answer — and then to research it. Such gems among dealers will run a repair facility that is both trustworthy and affordable. They will also offer price breaks — not as deep a price cut as from mail-order discounters, but enough of a break so that the customer knows they are trying.

One dealer who wrote me detailed all of the wonderful things he does for his customers. I felt very envious of his customers and told him he should post a copy of my first editorial in his store under the banner, "Look how lucky you all are to have *me* as your dealer!"

But the point is that not everyone, by a long shot, has access to such a dealer. And I'm even more sure of this than before.

FROM THE CUSTOMERS

Many people have contacted me telling me that I was "right on" in respect to my reporting of my own dealer trials and tribulations because my story was very similar to their own. In the past weeks I have heard many, many examples of dealer malpractice.

On the other hand, two or three people have taken the time to write to me on behalf of a dealer that they truly respect; or to tell me that things are just different in their area of the country and that they have no complaints.

The first group is large enough that I am now certain that there is at least a sizeable minority of Apple customers who are dissatisfied with their dealers and for good reason. But the second group has convinced me that I should "make one thing perfectly clear": I am not attempting to paint all dealers with the same tar brush.

But for those who, like me, are in the first group — we need some relief.

FROM MAIL ORDER USERS

Many people wrote to me to tell me that they were very, very happy with mail order. But others wrote to me with very long tales of woe — and of lost dollars and time.

Some companies like MacConnection and Programs Plus seem to have made many more friends than enemies. Some others, particularly the Northeastern Software (now in Chapter 11), PC Network and Icon Review, seem to have more detractors than fans.

Obviously, mail order cannot be considered an blanket solution. The Macintosh community need dealers that we can count on. And, if we find such dealers,

KAREN STOLPER

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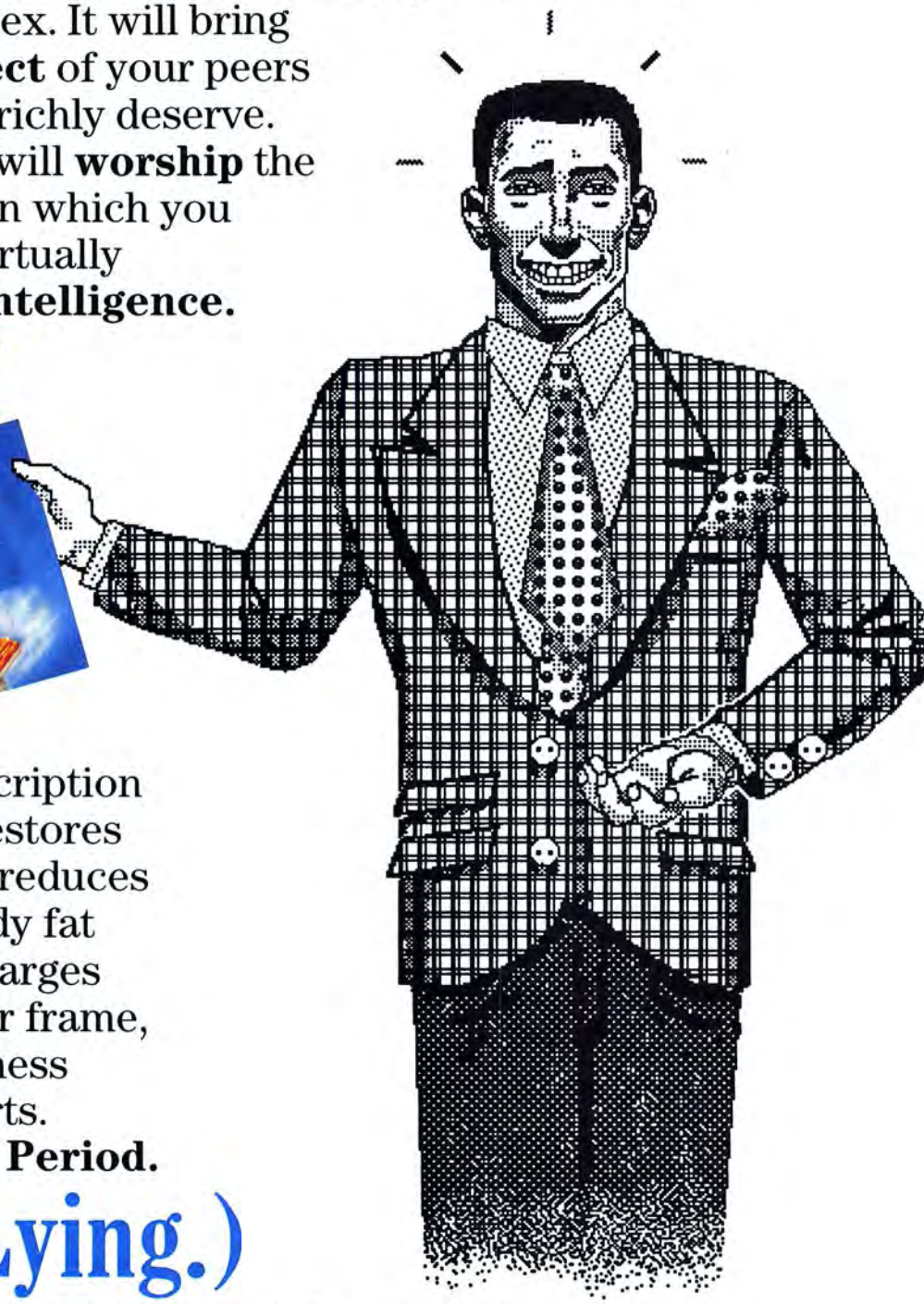

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Actually, MacUser can only assist you in becoming rather more productive on your Macintosh. As well as keeping you up to date on all the latest Mac products. Oh, and sometimes it's fun to read, too. And you do save rather a lot of money off the cover price by subscribing. Really! It's true! OK, then, if you don't believe me work it out yourself! Then use the coupon opposite.

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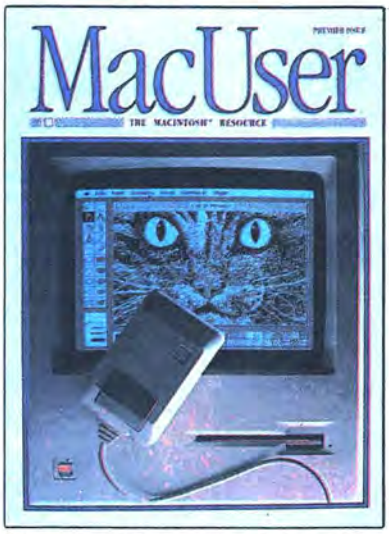

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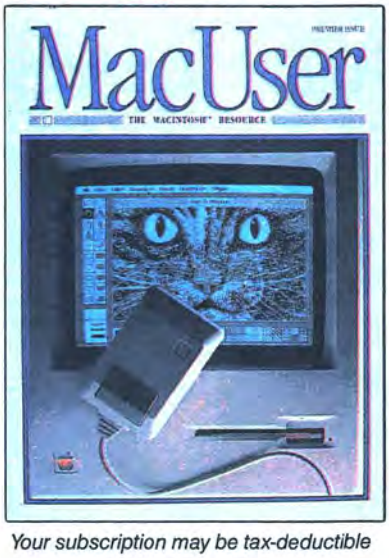

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YES ***MacMemory, MaxPlus***
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2. Does it use the same surface-mount technology Apple® uses?
YES ***MacMemory, MaxPlus***
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3. Do I get extras like RAM disk and print spooler software?
YES ***MacMemory, MaxPlus***
NO *Levco, SuperMac*

4. Will I have toll-free technical support and the longest board warranty available? *(Two years)*
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5. Am I getting the most for my money?
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For a more extensive comparison chart, and the dealer nearest you, just call us at 800-862-2636, or 408-922-0140 inside California.

**Data compiled as of December 1, 1986. Competitive products compared: Levco: OnePlusOne. Dove: MacSnap2, SuperMac: SuperRAM. MacMemory: MaxPlus.*

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Shift into high gear with TurboMax™, the high-performance accelerator board we loaded with all the features a power user needs. (Coming in February)

We started with *speed*. We added a new, more powerful 16 MHz CPU to nearly triple the speed of the Mac™. *Really* serious number crunchers can plug in the optional 68881 math co-processor to achieve speeds *hundreds* of times faster than a standard Mac.

We added *memory*. 1.5 Mb of *extra* memory that runs large programs easily, and can expand to a full 4 Mb to do even more.

We added our super-speed *SCSI port*. It nearly doubles the speed of the SCSI on your Macintosh Plus, and *adds* the high-speed SCSI to your Mac 512K. Hard disks run faster. (And internal hard disks will just plug in.)

We made sure your Mac would remain *100% compatible* with your software.

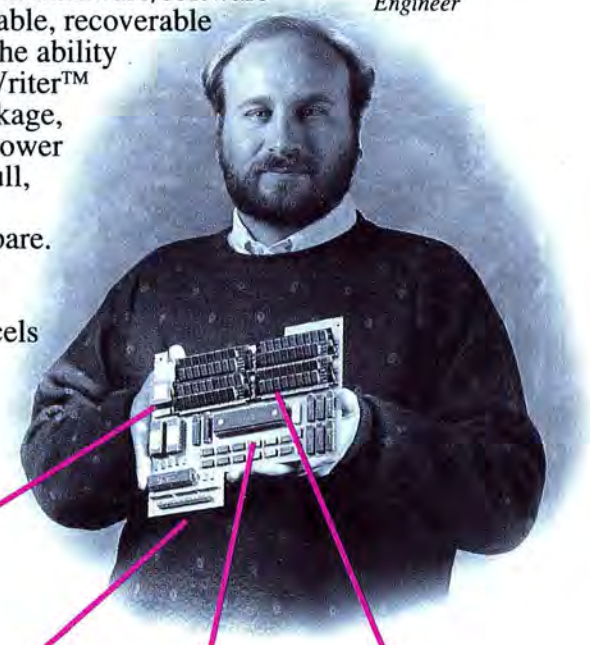
We built in *MaxSave™*, our hardware/software system that gives you a reliable, recoverable RAM disk in memory and the ability to work while your ImageWriter™ prints. To complete the package, we included an additional power supply, internal fan and a full, two-year warranty.

And price? Beyond compare. For the price of its closest competition you can buy the TurboMax and *two* Excels (the spreadsheet from Microsoft *and* the car from Hyundai).

Who could ask for anything more?

"A Macintosh™ accelerator board is on every power user's wish list. But price kept most of us wishing. We worked hard at MacMemory to produce the power board you need at the price you can afford."

John Lozano
Engineer



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Optional 16MHz 68881 floating-point chip addressed as peripheral to 68000. Works with all programs using SANE or offering 68881 support.

SCSI Port
Added super-speed SCSI port, up to two times faster than the Macintosh Plus. Adds 50-pin port to 512K Macintosh or speeds up existing MacPlus port. Ready for optional internal hard disk.

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16MHz 68000 processor. 200% faster than the Macintosh or Macintosh Plus. Addresses all daughterboard RAM with no video wait states for overall speed improvement of 250%.

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then we need to support them as they support us.

But that still leaves us right where we were — with some people left out in the cold and with no cavalry in sight.

C'MON CUPERTINO!

One Apple employee told me that we "made some waves" with the first editorial. Another told me, "They're talking about it in the halls here."

Unfortunately, no one has told me they are seriously considering the idea of a Consumer Evangelist. So, here's one more attempt now based on all of the feedback I received from the people above.

I believe more than ever that Apple Computer should consider adding the office of Consumer Evangelist to their corporate hierarchy.

The Consumer Evangelist would have a phone number published on all Apple warranty materials. This number would be used by the consumer to report any problems with dealers.

The number should not be used to report things such as, "Well, I think his prices are too high." It would be used for complaints such as, "This dealer's repair department charged me $300 for a repair that I think was only worth $50" or "I went to one of your dealers and they wouldn't (or couldn't) show me how to connect my modem after I purchased it."

The Consumer Evangelist would not treat followup calls to a dealer in an adversarial manner. Instead, the CE would act much the same as a consumer affairs help line.

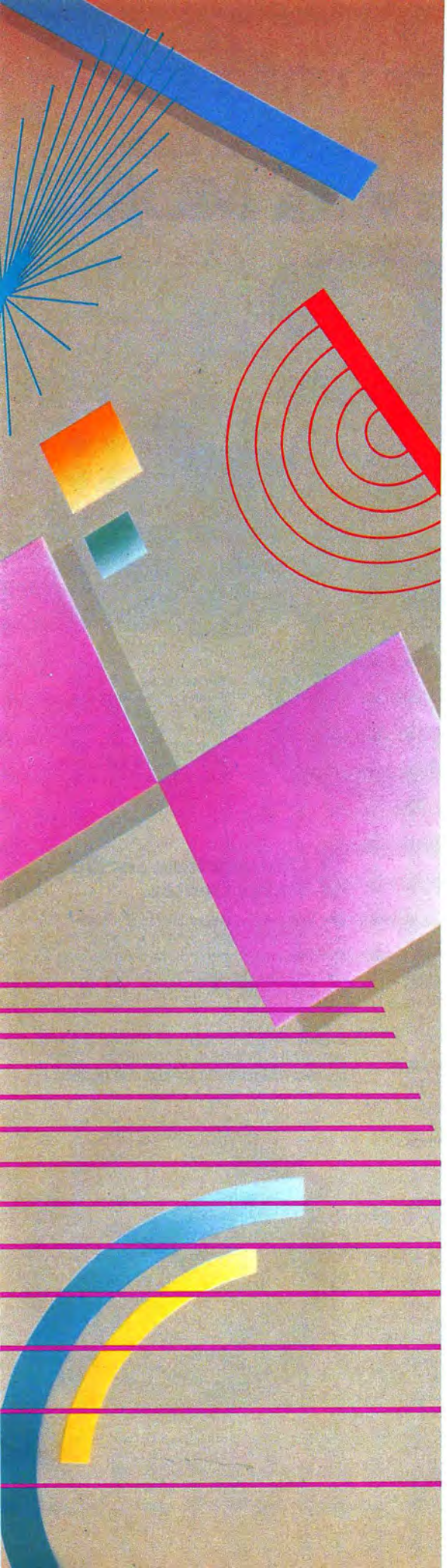
Most calls might go, "Did you really charge Mr. Loser $300 for a RAM test? What did he forget to tell us? Oh! You had to replace the RAM, that explains it! We'll let him know."

But there would occasionally be calls such as, "You did charge that much money for that? Well, Apple considers that type of fee to be unacceptable. Would you be willing to refund a part of that fee? We really do not want to have to look at your franchise."

And, once in a great while, there would be a call such as: "Hello, Mr. Crowley? This is the 666th complaint we've had on you and unless you can spell out a good reason not to, we are about to revoke your dealer franchise."

In the long run, I think a CE would help everyone — customers and dealers alike. I think it's worth a try, and I think the time is right. Please, Apple: Go for it!

Next month I promise to write about something completely different. Maybe whales or something.



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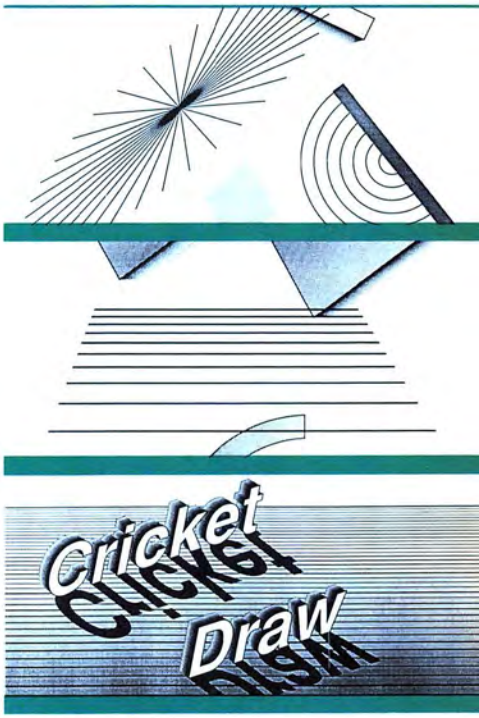

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How to dramatically improve the way you manage meetings, ideas, time and people with MORE.™

If you're like most people your time is valuable. You believe you should, and could be more effective managing your daily tasks. Perhaps you've even tried conventional methods of increasing efficiency—making lists of priorities, delegating, keeping diaries, etc.—only to find little has changed because you're still wasting valuable time.

That's why we wrote this guide. We want to explain four ways to improve the way you work by using the power of MORE and a Macintosh.

If you're too busy to read further, please skip ahead to the coupon and see how easy it is to receive our free time saving booklets on ***Managing Meetings, Preparing Business Plans, Creating Tree Charts and Organizing a Status Center.***

What's different about this meeting? The Macintosh on the table is running MORE. With MORE in the meeting, ideas will be focused and presented better than ever before possible.

1 Start a revolution at your next meeting.

How often do you come away from a meeting satisfied with the results? Probably not as often as you would like. Here are some simple ways to get more accomplished at your next meeting:

- Have a specific objective in mind, as the meeting progresses, be sure you're still dealing with the same problem.
- Only cover things that cannot be put across in other ways—bulletins, manuals, direct contact with supervisors, etc.
- Don't try to cover more ground than time will permit. You can't solve the world's problems in a 30-minute staff meeting.
- Prepare for the meeting. Find out what the other people attending need to know before the meeting.

Why MORE is so revolutionary in meetings.

Try taking a Macintosh and MORE into your next meeting. Start with an outlined agenda, develop the issues into a group action plan. The participants—even those who don't use a computer—can direct the content and organization of the plan. Graphic Tree Charts and Bullet Charts help you present the impact of your decisions. At any point, you can review what's been accomplished. Everyone gets a uniform set of meeting notes, on disk or printed. This frees the participants from having to take detailed notes. Everyone knows what was decided, so next time you sit down there won't be a debate. Spreadsheets started a revolution for people who work with numbers. MORE is starting a revolution for people who spend time in meetings.

2 Manage people and projects effectively.

Managing people and projects can be very difficult. Some managers apply common sense, others learn by doing, others simply avoid the problem all together. In an effort to simplify a complicated subject here are a few things that will help any manager:

- Managing requires a great deal of talking and listening. It sounds easy, but it is a constant job that requires a concentrated effort.
- Job descriptions and boundaries should be provided for every person's job.
- Feedback on performance and encouragement improve motivation. Doing and saying nothing leads to stagnation.
- Find the best people you can and support them.

Now there's a way to manage people and projects better using MORE. Managers, executives, corporate planners and personnel staff can use MORE to outline their management ideas and instantly transform them into a Tree Chart. You can use Tree Charts for organizational charts, project flowcharts, decision trees, block diagrams or time lines. MORE also is a powerful tool for writing job descriptions and preparing employee reviews. As a project management tool, MORE is fast and flexible.

3 Create a time saving Status Center.

The first step in becoming more time-efficient is to identify how you spend your time. Naturally, once you've figured how and why time is spent, you begin to do things that give you higher payoffs and more satisfaction.

For you, MORE becomes a convenient and powerful electronic notebook and card file. You collect and organize the details of

The next best thing to having a clock that runs backwards is having a Macintosh that runs MORE. With MORE you can set up a Status Center to organize the details of your daily work.

Some of the best ideas you have don't always happen in front of computer. (That could change after you've used MORE.) For example, you can take your ideas from scraps of paper to a finished presentation in minutes.

daily work in an outline—your personal Status Center. You keep this outline up-to-date, using it to:

- List and organize your tasks
- Record names, addresses, and phone numbers
- Keep your daily calendar
- Write and file notes and memos
- Track your expenses

MORE's power outlining lets you change and interconnect your lists with ease. You can use the Templates feature to store "boilerplate" such as an address form and call it up at any time. The calendar feature will generate a daily schedule automatically. Most of your writing and word-processing work can be done right in MORE. You can even dial a phone, record the time and date, and calculate a sum—all by pressing a key. MORE is the ultimate tool for desktop productivity.

4 Process your ideas, then present them.

If you've ever had to prepare a presentation in a hurry—you know how frustrating and time-consuming the task can be. Technique is an important part of presenting your ideas effectively. Here are some simple steps that will take you from rough ideas to finished presentations:

- Make a "laundry-list" outline of basic ideas.
- Become uninhibited with your ideas—don't edit on your first pass.
- Be generous with headings, call-outs, charts and illustrations.
- Allow yourself the flexibility to change your presentation, even at the last minute.

Now you can prepare a presentation quickly and professionally, even at the last minute. For the first time, MORE integrates idea processing with idea presentation. You can outline your ideas and quickly transform them into attractive Bullet Charts. Add Tree Charts and pictures, and you have a full-fledged slide show. MORE is ideal for the entrepreneur writing a business plan—and also for anyone who develops presentations: managers and decision makers, executives, corporate planners, sales staff, educators.

There's more...

To receive your free time saving booklets, fill out the coupon below. To experience the power and speed of MORE in person, visit your local computer dealer for a demonstration.

Suggested retail price $295

For Your Nearest Dealer Call
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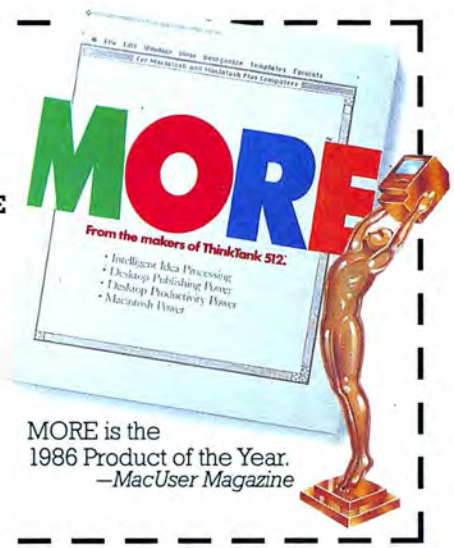

MORE is the 1986 Product of the Year.
—MacUser Magazine

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Memorandum™. You might want to make a note to yourself.

You know those sticky yellow notes you're always making to yourself. Well, now you can do the same thing electronically. With Memorandum™ from Target Software.™

Memorandum lets you attach electronic sticky notes to documents and files.

You can use it for spreadsheets, reminding yourself of the details of a specific expenditure. Memorandum attaches itself to a spreadsheet cell, so it stays in place through repeated calculations.

It's also a great aid in word processing documents and database files. Because you don't have to stop work to check a source or verify data. Just make a note and attach it.

Notes are stored in a separate file. A single command can show all notes at once. Or a note on a specific cell.

Make a note to yourself to check out this invaluable Desk Accessory soon. It's just $99.95. And it's compatible with Excel,™ Multiplan,™ Jazz,™ Works,™ and loads of others.

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Ten thousand pages, take it or leave it.

For those of you going places, here's a little something that solves big storage problems in the time it takes to say "who has the Farnsworth financial files?"

Introducing Totem.™

A rather revolutionary Bering 20 mb Bernoulli compact disk drive system for Macintosh computers. And, the first truly *portable* 5¼" system. One that lets you tote around 10,000 pages of data on a sleek cartridge about the size of a piece of bread.

Translated, that's 25 times the storage you get on one standard floppy.

Yet unlike floppies, the Totem is no slouch for speed. It's just as fast as a hard disk. In fact, your computer will think it's a hard disk. You can even share it with co-workers. And its advanced Bernoulli aerodynamics make it resist head crashing. If you've ever used hard disks, you know what a pain that can be.

But the real beauty of Totem is that it fits perfectly right under your Mac. No mess. No fuss. And no extra hardware to buy. To add storage, just pick up another Totem cartridge.

Last, but certainly not least, there's a whole family of Totem drives to choose from. They're all in the brochure. To get yours, write or call Bering Industries, Inc., 280 Technology Circle, Scotts Valley, CA 95066. Inside California, call 800 533-DISK. Call 800 BERING 1 outside California. Just say "I'll take it."

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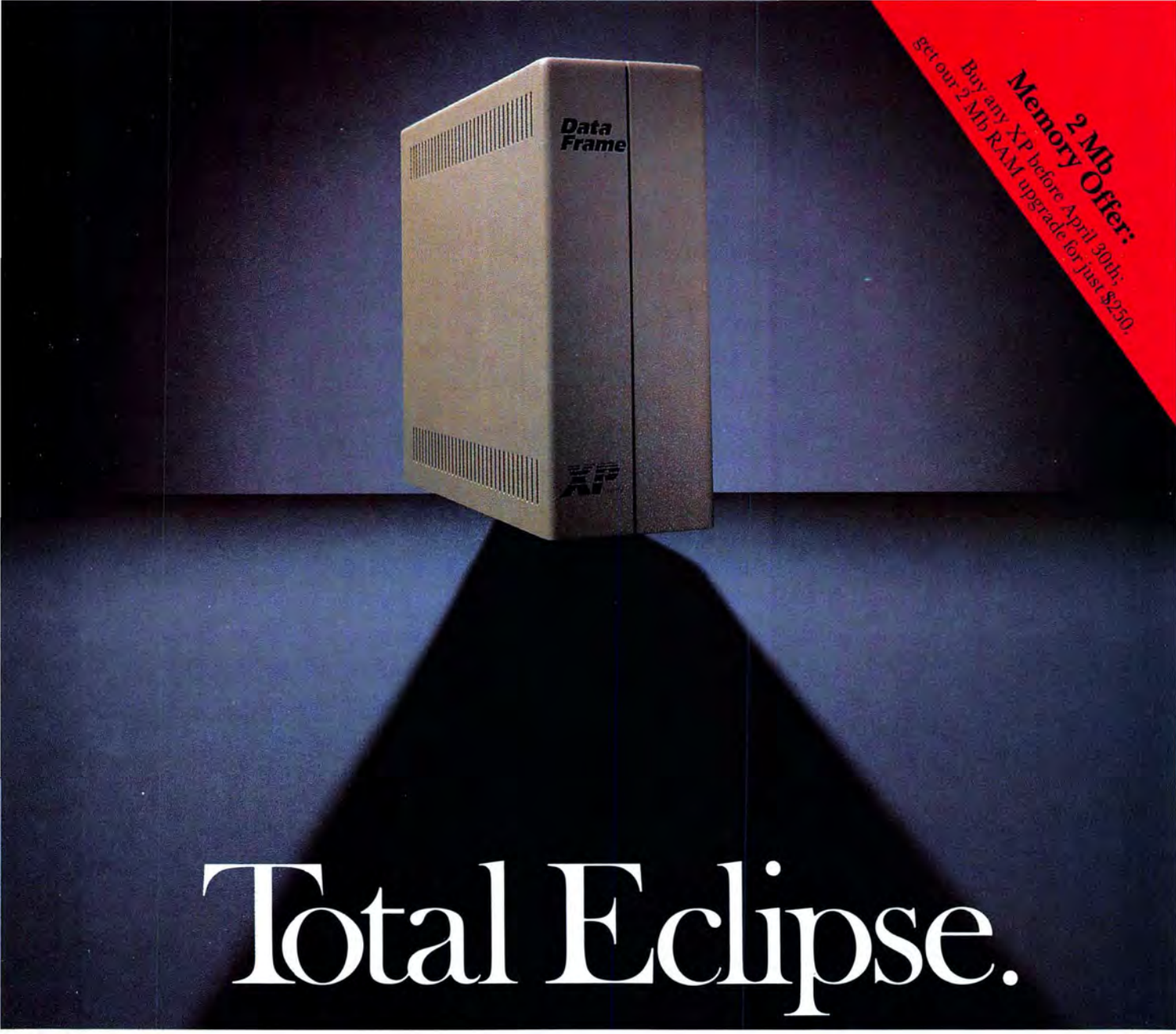


Introducing DataFrame XP,™ the SCSI hard disk that eclipses all others.

DataFrame's superiority has been clear since Apple chose it to introduce the speed and performance of the Macintosh Plus. And now, while other manufacturers are still working to emulate our best selling DataFrame 20, SuperMac Technology™ is proud to introduce *the second generation hard disk that clearly outshines:* DataFrame XP.

The fastest SCSI under the sun.
DataFrame XP's advanced SCSI technology delivers virtually twice the speed of any other full SCSI drive—including Apple's recent release. Every program runs *faster.* And the programs that make frequent use of the disk run *much* faster.

Reliability that overshadows all others.
DataFrame is far and away the critic's choice. *The MACazine* gave DataFrame its highest rating. And *Macworld* says "DataFrame was one of the few completely trouble-free drives tested."

Unbeatable reliability is the reason SuperMac offers the only full one-year warranty in the business.

A design so simple, it's brilliant.
DataFrame XP comes with all the features of the original DataFrame. Preformatted for immediate set up and use, just stand the XP beside your Mac and plug it in. And it comes with free backup, print spooler, and self-test software *plus* free lifetime software upgrades.

DataFrame XP always stays cool because its vertical 'chimney' design efficiently vents heat without use of a fan (that's why it's quiet!). The XP sits beside your Macintosh, not inside or under it, so the drive won't heat your system.

How to make your Mac shine.
Just add a DataFrame XP. Or upgrade your existing DataFrame to XP performance. Both are every bit the DataFrame *The MACazine* called "the best buy for a SCSI hard disk considering price, product quality, performance, warranty and technical support."

Compare the rest of the SCSI drives. Then test the XP. And prepare for something overpowering: A total eclipse.

SuperMac Technology
950 N. Rengstorff Ave.
Mountain View, CA 94043
(415) 964-8884

SUPERMAC TECHNOLOGY

Steven Bobker

We're always happy to hear from our readers (well, almost always), so keep sending your comments to Letters to the Editor, MacUser, *25 West 39th Street, New York, NY 10018. All letters become the property of* MacUser *and we reserve the right to edit any letters that we print.*

ON THE SHORT SIDE

In the October issue of *MacUser,* Doug Clapp was featured with a "Thumbs up/Thumbs Down" article. In the article Doug made some sarcastic and unflattering remarks about the Mirror Technologies internal 20 meg hard drive. What Doug didn't tell you is one of the main reasons his Macintosh failed. It wasn't due to the internal drive. Or the Macintosh. It was caused by a broken battery port, dangling by its wires and finally shorting against the power supply. This, by the way, might be the reason Doug previously had numerous HyperDrives fail in his Macintosh (a fact he did not mention in his article). Mirror Technologies diagnosed and repaired Doug's Macintosh... after which our drive operated successfully.

In direct reply to Doug's article, "Yes, we'd like the internal drive back. We have a new 20-meg tape drive and an 40/40 drive/tape combination we want you to test... but please, during your reviews, distinguish between problems we can and cannot control."

JOEL RONNING
PRESIDENT, MIRROR TECHNOLOGIES

A MATTER OF FUNCTION

I must take exception to John C. Dvorak's column in the September 1986 issue of *MacUser.* I honestly do not know why you would let him print such a derogatory article concerning "what is still wrong with the Mac." Anyone with half a brain knows that no product is perfect, but to tear down a product that is obviously the choice of your readers is pure insanity. I don't mind a little constructive criticism, but to rail about a product your magazine supports is unproductive and unnecessary. It only encourages a defensive attitude. I also object to the foul language used in the column. It is unnecessary and unprofessional.

Do yourself a favor and get another writer for this space in your magazine.

SUE E. GARBER
LIVERMORE, CA

While it might seem odd for a Macintosh magazine to give space to unreconstructed criticism of the Mac, it's really a matter of balance. After all, John C. Dvorak is our anti-editor. As he said in last month's column: "MacUser *has this anti-editor concept whereby I am supposed to moan and groan and get the readers in a frenzy." From that standpoint, it looks as if he's doing his job.* — LK

CHECK IT OUT

I'd like information on a program called *Mac-a-Mug* by Shaherazam. This program was referred to in a *MacUser* advertisement promoting the magazine.

MRS. GARY PEDIGO
GREAT BEND, KS

Sorry you've had to wait so long, but a quick look at our MiniFinders Graphics & Design section should give you the information you want. Mac-a-Mug *was reviewed in depth in the May 86 issue.* — LK

POSTAGE AND WORD HANDLER

I recently sent my *Word Handler* disk to Advanced Logic Systems for an upgrade, accompanied by a self-addressed, stamped envelope as stipulated in your New on the Menu section. ALS replied with a form letter saying I had "unfortunately" not enclosed the $2 shipping and handling fee. For your further information, ALS did not even return my master disk.

I have no intention of paying the fee, or even asking for my disk back. I found the program not good enough to be worth bothering with. (I strongly disagree with the four-mouse rating in your October issue.) I'll just write the whole thing off as a loss. And I will not do any business again with ALS.

HERBERT KROEMER
SANTA BARBARA, CA

When we contacted ALS, Mr. Nathan Schulhof was emphatic that all that would be required would be the SASE. He made a point of saying that without it, the transaction would not be completed.

Obviously, ALS has changed policy yet again. We apologize for them. — SB

YOU KNOW THE TYPE

This is to object to Neil Shapiro's column in your November 1986 issue, "The Reek of Hot Toner." What hypocrisy for your columnist to rail against unreconstructed typographers who don't believe in the LaserWriter proof copy as final copy, when neither does *MacUser.* Let's see you people put out your entire magazine at 300 lines/inch resolution!

I think we ought to find a way to distinguish desktop publishing, where the laser printer is the printing press, from desktop publishing, where it's just the proofing device. When we do, we'll find that both our avant garde and our traditionalist segments of publishing can embrace the Mac and the LaserWriter.

Speaking of typography, in Philip C. Russell's article, "Bringing PageMaker to Life," there are two rather glaring errors in one subhead: "Life Ain't Always WSYIWYG." Oh, so true! I also appreciate his novel, but erroneous, definition of the term "leading." Everyone in desktop publishing who writes about leading seems to invent a new definition, and this has become my most reliable test of whether a writer really knows what he or she is talking about.

DAVID A. SHUGARTS
PATTERSON, NY

HAYDEN/SPINNAKER

On July 27, 1986 I mailed a package containing the three original disks from *Hayden Score Improvement System for the SAT* with a letter explaining that the disks would not boot on my Enhanced Mac. When I tried to call Hayden, the operator told me that Hayden did exist at the above address, but had no listed telephone number. Since Hayden's number was unlisted (note: not discontinued), the only possible means left was to rely on the mail.

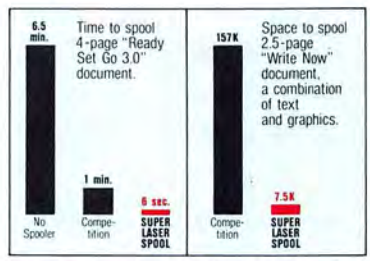
In August my retailer told me that Hayden had been taken over by Spinnaker. I phoned Spinnaker and was told that they would not support Hayden's Macintosh software; working disks for the SAT system would not be provided.

When I called my supplier with this news, I was relieved to hear that they

TONY LIMUACO

BLINDINGLY FAST. By sending your print files to the background and returning control of your Mac to you, SuperLaserSpool lets you work and print at the same time. And it does this *5 to 40 times faster* than its nearest competitor.

SuperLaserSpool gets you back to work fast. You never wait for the printer, no matter how many documents you have queued up or even if the network is busy. SuperLaserSpool automatically manages the entire printing process while you work.



Look how much faster SuperLaserSpool will give your Mac back compared to its competition.

SuperLaserSpool's files are so small, you don't have to worry about running out of disk space.

WORKS WITH ANY APPLE® PRINTER. SuperLaserSpool can print to the LaserWriter and ImageWriter™ (either direct-connect or AppleTalk™-connected).

INCREDIBLY COMPACT. Other spoolers require so much storage space that a hard disk is essential. Not so with SuperLaserSpool. You can use it with floppy-disk systems because its files are so compact.

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EASY TO USE. With SuperLaserSpool, you can view all the jobs in the print queue, change their priorities, delete jobs, receive on-screen help, and check on network activity. Your spool files are always safe, even if the system crashes.

SuperLaserSpool works with almost all Macintosh applications. You can even leave and enter different programs without disrupting the printing of documents.

And it's completely invisible: You can launch it and forget it's even there.

- **SINGLE-USER: $149.95**
- **MULTI-USER: $395.00**

Get SuperLaserSpool at your local SuperMac dealer today, or order direct.

SUPERMAC SOFTWARE

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would accept return of the system for credit. I see that the software is still offered, without disclaimer, in the latest (November and December) issues of major Macintosh magazines by both editorial and advertising. This leads me to hope that Spinnaker will support this software system and will honor Hayden's warranty.

DAVID K. ANDERSON
BUFFALO, NY

When we called Spinnaker recently we were assured that they plan to support Hayden software products. However, there are no plans at this time to upgrade or redevelop any of them. The Hayden number is unlisted because there's really no one there for other than "caretaker" purposes — they're not trying to hide out or duck the bailiff. You can get more information about Spinnaker's plans for Hayden products by writing to Spinnaker/Hayden, 1 Kendall Square, Cambridge, MA 02139; or call (617) 494-1220. — LK

FOR ART'S SAKE

My artistic career recently came to a grinding halt when *SuperPaint* failed to run on my hard disk drive. What's the point of having a HD if you have to resort to floppies to run a program? Needless to say, Silicon Beach Software received an immediate phone call and letter documenting the problem.

On receipt of my letter, Eric Zocher addressed the problem via telephone and sent a memory check program by next day air. My problem turned out to be a third-party upgrade, not *SuperPaint* or my Mac Bottom.

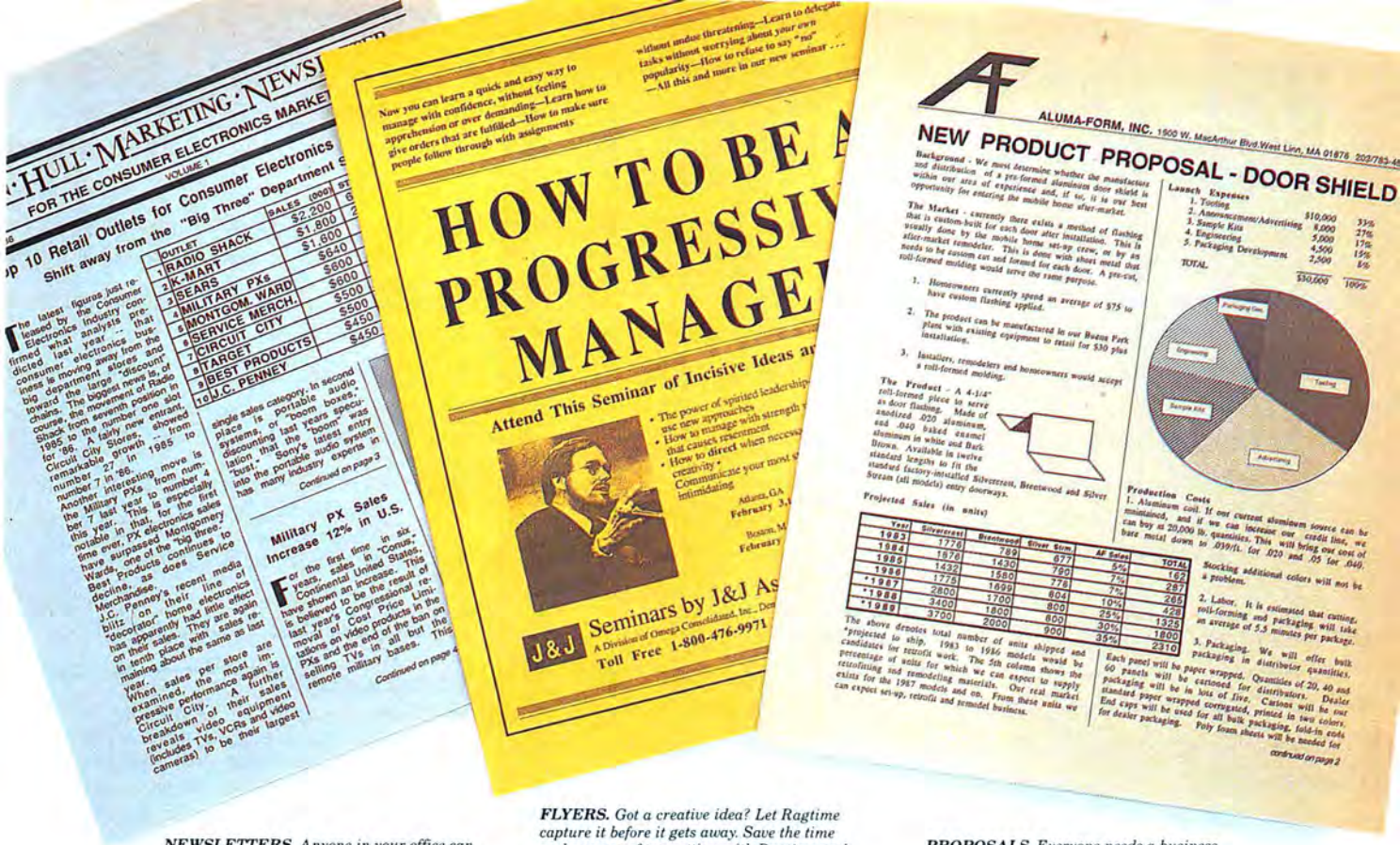
I must tip my hat to Eric and Silicon Beach for their concern in determining where the problem was so other users could enjoy a bug-free *SuperPaint*. It's my hope that other software developers will adopt the same attitude.

STEPHEN M. SEELING
GRAND PRAIRIE, TX

REDEFINITION

After looking for a computer for some time, checking out many brands and reading a great deal, I dropped out, choosing to wait for something "right." Then last year while visiting a friend, I discovered the Macintosh. Just one afternoon's experience and I knew. This is it. This is what I've been waiting for.

It is more than the computer for the rest of us; it is *the computer* at last. Born of all the trials and experiments that came before it, the Macintosh is a proto-



NEWSLETTERS. *Anyone in your office can create pages with* ***punch!*** *With Ragtime's ease of use and flexible capabilities, newsletters like this are a snap.*

FLYERS. *Got a creative idea? Let Ragtime capture it before it gets away. Save the time and expense of typesetting with Ragtime and your own initiative.*

PROPOSALS. *Everyone needs a business advantage. When your presentations include spreadsheets and graphics to make your points, you'll be noticed!*

Word Processing is Obsolete!

Presenting RAGTIME™ Page Processing

Page Processing; A New Breed

Word Processing has served you well for over two decades, and has now been replaced by a new, superior application—Page Processing. It's called Page Processing because it contains all the necessary tools for creating exciting pages and professional documents. Gone are the limitations of words without pictures and text without numbers.

Ragtime, the premier Page Processor for the Macintosh computer, is the first to combine the functions of **word processing, spreadsheets, page layout** (also known as desktop publishing), **business forms generation** and **graphics management** all in one complete package. Effective businessmen need these combined functions to create truly professional documents such as proposals, manuals, financial presentations, newsletters, and advertisements.

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The Page Processing Advantage

If you are using separate software packages for word processing, spreadsheet and desktop publishing, you are not achieving your full potential. A new standard in top-quality business documents has been established with the integrated power of *Ragtime* Page Processing.

As an example, consider a typical business proposal, like that pictured above right. Only with the power of *Ragtime* Page Processing can you create the entire page layout (including columns, hairlines, headers, and the like) and simultaneously word process *all* your required text. Next, you can build in a persuasive spreadsheet with all the facts and figures (a requirement in any business proposal), all without leaving the application. Then bring in the graph that illustrates your data (a picture is worth a thousand words processed). *Voilà,* you and *Ragtime* have produced your most professional proposal ever. All this at a fraction of your previous efforts and costs. This is the Page Processing advantage.

Commitment to Innovation and Excellence

Orange Micro has spent over six years providing innovation to Apple users all over the world. To date, we have sold over 500,000 Apple enhancement products, and gained the support and respect of the industry.

Special Opportunity to Try Ragtime

We would like to give you an opportunity to experience the power of *Ragtime* Page Processing on your own Macintosh, at your convenience. Complete the coupon below and discover Page Processing for yourself.

FILL OUT AND MAIL TODAY!

Send a check or money order for $10 with this completed form and receive:

- Ragtime Evaluation Disk
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- $10 Manufacturer's Rebate coupon redeemable with Ragtime purchase
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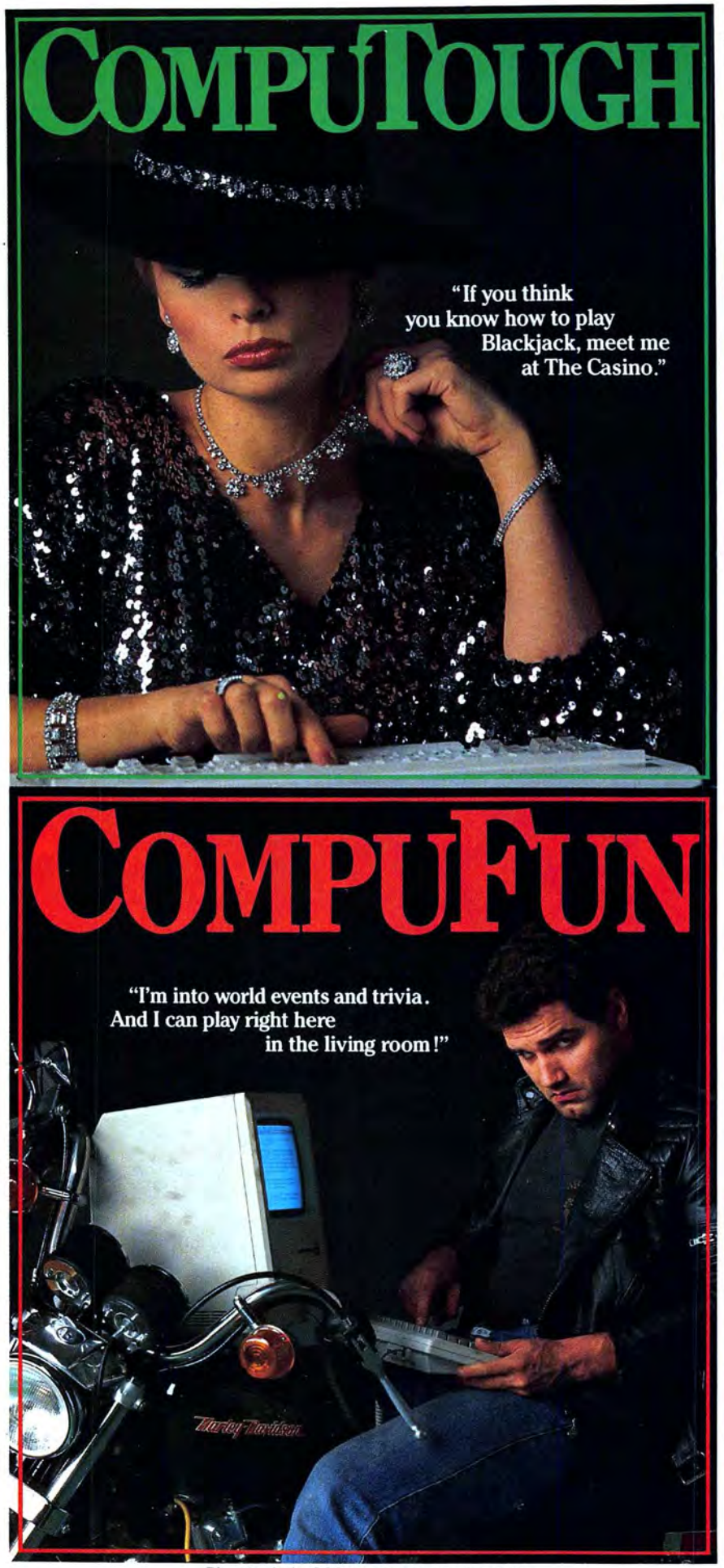

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type of friendly binary synergy. (Thank you to all those pioneer geniuses who revealed the power in 0 and 1.)

I'm amazed at people who persist in believing that a computer is not effective or powerful unless you have to struggle to master its use. It's similar to the concept that if you're cheerful and happy at work, you're not serious, not really working.

This is the new age. It's OK to have fun, to make work play, to create and recreate simultaneously. A toy? You bet! We are redefining the wor(l)d.

KAIVALYA
HILO, HI

PRESTIDIGITATION

I have been waiting for a number of months for an explanation of an unusual change in your listing of the current version of *Excel* in the New on the Menu section. In your April through July '86 issues you listed the current version of *Excel* as 1.01. This caused me some concern as I have been a registered owner of *Excel* since January 1986. In the event of an upgrade, I would hope that Microsoft would notify me.

The strange part is that since your August 1986 issue, the current version has been listed as 1.00. If the original 1.01 was not just a typographical error, I would expect that your otherwise thorough inquisitiveness would have led you to investigate this unique reversal. What is the story behind this gossamer one one-hundredths of an update?

STEPHEN D. TILEY
CARLISLE, PA

There was a version 1.01. It was meant for overseas (Great Britain and Europe) buyers. The only differences between it and version 1.00 is that 1.01 has been "localized" for the areas in which it was sold. Unfortunately, when Microsoft told us about version 1.01, they failed to tell us it wouldn't be sold in the United States. By the way, the current version is 1.03. — SB

BY THUNDER!

On behalf of Batteries Included and myself, I would like to thank you for the great Quick Clicks review of *Thunder!* in your December 1986 issue. It's always gratifying to get a great review from your publication.

I must, however, point out an inaccuracy in the review that I feel your readers should know about. The reviewer mentioned that there is a 32K limit when checking selections. This is only true in

the case of *MacWrite*. The problem is not *Thunder!*'s, but *MacWrite*'s inability to paste a selection greater than 32K into a document. Apple has been informed about this bug, and will hopefully be fixing it in future versions of *MacWrite*. When this is done, *Thunder!* will be modified to take advantage of the change, and will no longer limit pasting of *MacWrite* selections to 32K.

EVAN GROSS
AUTHOR, THUNDER!

NOT SO HOT

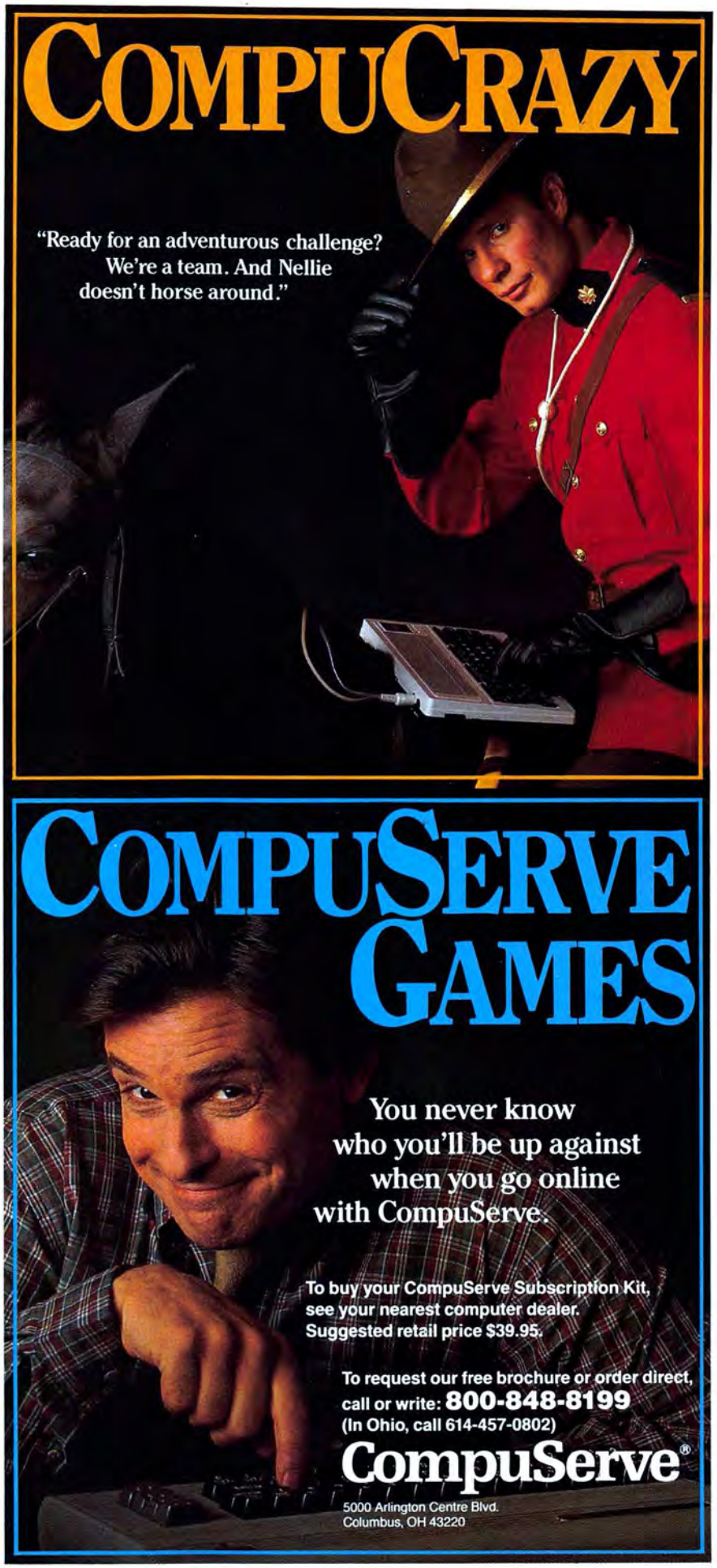
What's hot: a software package for writers, a program that will help me write better. A package that will do some incredibly difficult (programming-wise) but very useful things with text documents. Doesn't it sound fun? Neat? It is. It's just what I need, but. . . .

What's not hot: Vaporware. Like a software package advertised in the June 1986 *MacUser* that does all these wonderful things. I tried ordering it again and again, but every place I tried kept telling me they weren't accepting orders (or that the lead time was so great that it would be hazardous to my economic health). Finally, in August, Icon Review told me that the shipping date for *Doug Clapp's Word Tools* was September 15. Good enough . . . here, please take my money! September goes by. October goes by. Now November has come and gone. Time for another long distance call. "The current expected release date is January." "1987?" (Sarcasm is one of my more highly developed talents.)

I have now been out of my $79.95 for three months. Is it time to get upset yet? If there's a contest to see who can do the best job of creating vaporware, my vote goes to the Aegis Development/Doug Clapp team! But even after all this, I'm still waiting. I haven't requested a refund. I still want *Doug Clapp's Word Tools!* So really, when is it coming out? I mean really. It is coming out, isn't it? Let's get serious.

DOUGLAS BRICKETT, JR
JARRETTSVILLE, MD

Frankly, you weren't the only reader to hoist Doug on his own petard, so to speak. And we wish we could give a definite answer, we really do. But all we can say is that Word Tools *has been undergoing an increasingly lengthy series of beta tests and could possibly be out by the time you read this. If you still haven't seen a copy, permission granted to become as upset as you like.*
— LK



"Our goal was simple: capable writing tool mind saying, we've

Charles Simonyi, Chief Architect, Applications, Microsoft Corporation.

We weren't looking for incremental improvements. We were shooting for a quantum leap. Not a word processor but a *document* processor. A tool which would exceed every expectation and overwhelm every standard.

From now on, when people define what software should do for the production of documents, they'll point to this: Microsoft® Word version 3.0 for the Apple® Macintosh.™

On Word, everything you need to structure a document is integrated into the program. Starting up front with the outliner. Followed by style sheets which you can quickly set up to standardize and recall the formats you use repeatedly. Then a built-in spelling checker proofreads for you when you're finished.

Because speed is of the essence, we made Word a rocket. It scrolls faster, saves faster. And you can't out-type it.

Because there's a big, diverse world out there, Word easily shares and automatically converts files created with the IBM® PC version of Word. And supports DCA protocols for exchanging formatted files with minis, mainframes, and dedicated word processors.

Finally, what you see on screen will look superb on paper. Word will set text next to graphics. And exploit the capabilities of laser printers beyond anything that has gone before.

But the most powerful feature of all is its accessibility. Word lets you run its menus in either Short or Full mode. The first, a concise, basic menu which gets new users producing instantly. The second, a comprehensive menu which taps into Word's vast capacities.

That's Word for the Macintosh. Not just the best word processor on any micro-computer, but the most effective tool of persuasion ever devised.

Microsoft Word is available for the IBM PC and compatibles and the Apple Macintosh.

For the name of the nearest Microsoft dealer or to upgrade to version 3.0, call (800) 426-9400.
In Washington State and Alaska, (206) 882-8088. In Canada, call (416) 673-7638.

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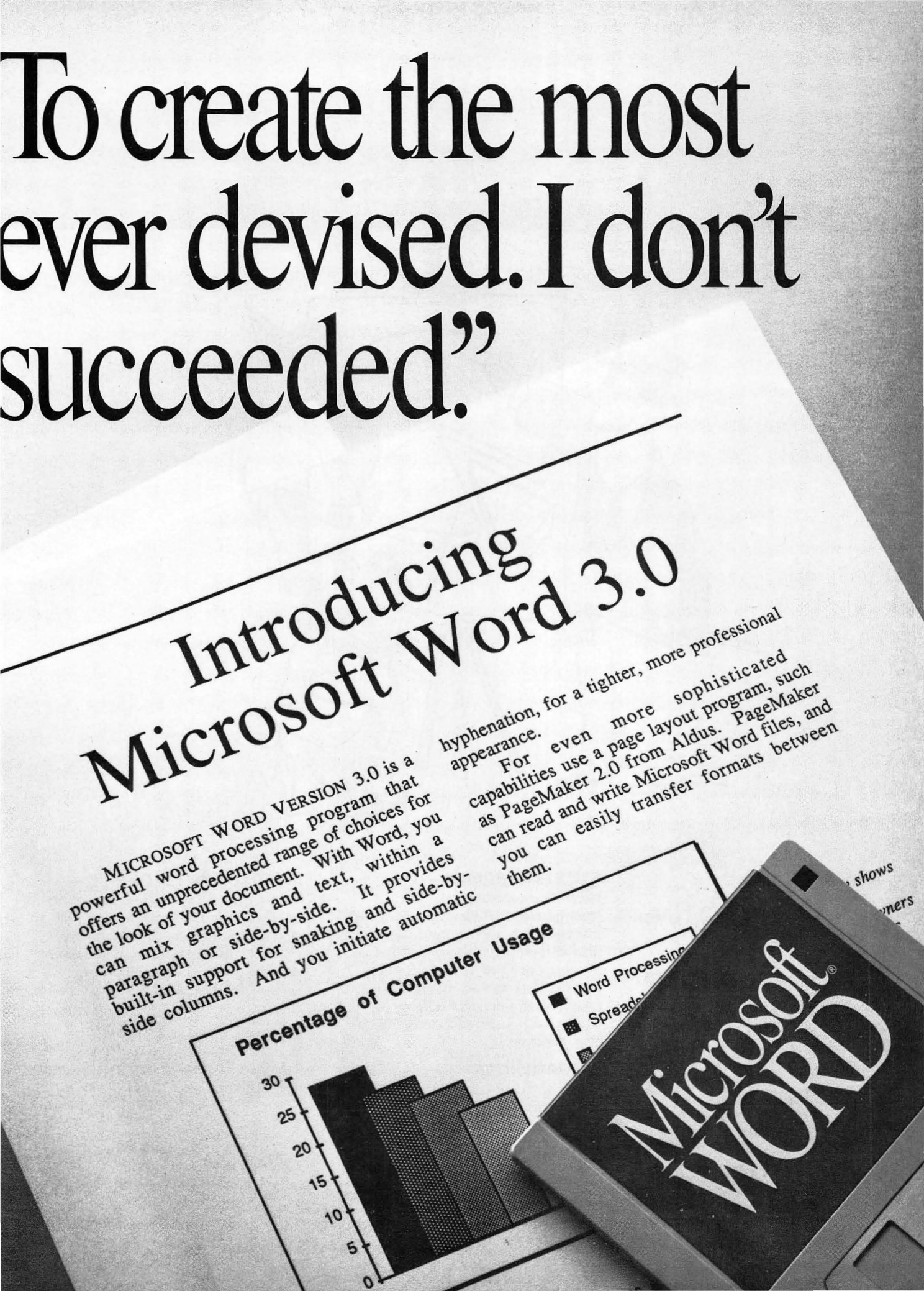
To create the most ever devised. I don't succeeded."

Introducing Microsoft Word 3.0

MICROSOFT WORD VERSION 3.0 is a powerful word processing program that offers an unprecedented range of choices for the look of your document. With Word, you can mix graphics and text, within a paragraph or side-by-side. It provides built-in support for snaking and side-by-side columns. And you initiate automatic hyphenation, for a tighter, more professional appearance.

For even more sophisticated capabilities use a page layout program, such as PageMaker 2.0 from Aldus. PageMaker can read and write Microsoft Word files, and you can easily transfer formats between them.



Still making presentations the hard way?

Finally.

Desktop Publishing Software Created for Professional Communicators

STORYBOARDER™ — Doing film, television, advertising or A/V communications? Plan on-screen with Storyboarder. View output as real-time animatics with zooms, wipes and dissolves, or print out *superb* storyboards. Fast, friendly and inexpensive. Like having a design studio, animation house and video editor on your desktop!

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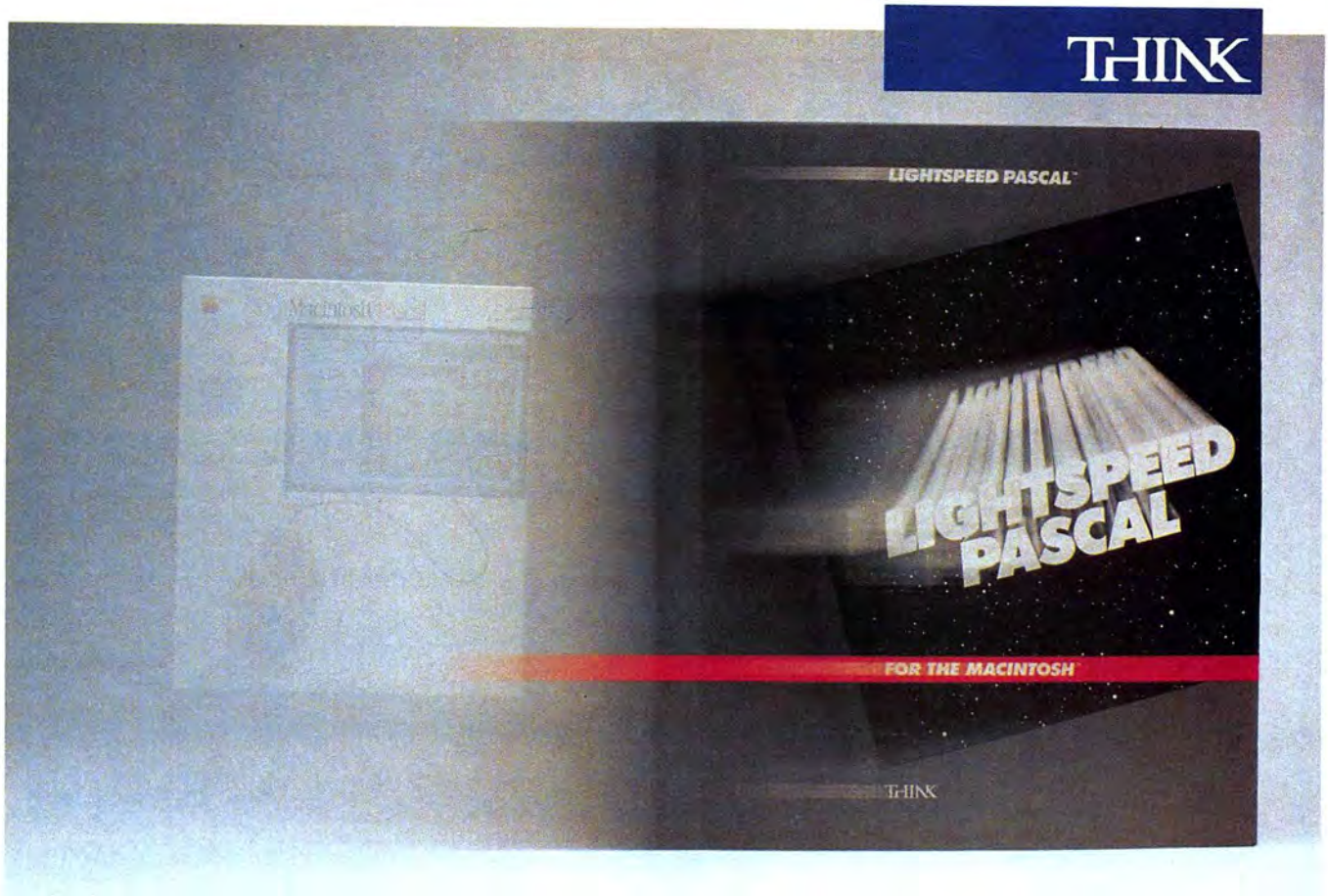

LIGHTSPEED PASCAL™
THE FUTURE REPEATS ITSELF.

JANUARY 1984. (Cupertino, California.)—Apple introduces the Macintosh.™ At the press conference, six software developers, including Microsoft and Lotus, announce their commitment to the new machine. Among them is THINK Technologies, a start-up developer of advanced systems software.

THINK announces Macintosh Pascal. It is a breakthrough. For the first time, a practical interactive interpreter is available for Pascal. People can now learn to program in a whole new way. They can look inside their program and get immediate feedback. Incorporating the Mac interface in this programming environment, THINK creates a new future for the Macintosh in education.

Writing in The New York Times, Erik Sandberg-Diment says "MacPascal alone might be reason enough for the college-bound science or engineering major to purchase" a Mac. The product becomes a standard in university computer science courses. Users are enthusiastic. But in time they demand even more from THINK.

AUGUST 1986. (Boston, Massachusetts.)—THINK introduces Lightspeed Pascal at MacWorld Expo. It is a breakthrough. It utilizes new compiling and linking technology previously available only with THINK's Lightspeed C. But it goes even further. Like Macintosh Pascal, it provides the same ability to look inside a program, but without the need for an interpreter. It offers blinding speed and the ability to build large programs. The response is overwhelming. In the first two weeks THINK sells thousands.

Lightspeed Pascal marks a turning point in programming the Mac. It has all the features that made Macintosh Pascal a standard. And much more. Now users can create real standalone "double-clickable" applications and desk accessories. THINK creates a new future for Macintosh programmers.

Lightspeed Pascal is priced at $125. It is not copy-protected. The package includes a 600-page manual with extensive index. It provides complete Toolbox/OS support. It is compatible with Macintosh Pascal and Lisa Pascal.

The future is here. Order Lightspeed Pascal now.

Please send me Lightspeed Pascal today. Enclosed is $ _____ for _____ copies. ($125/copy)

NAME TITLE COMPANY

ADDRESS CITY STATE ZIP PHONE

ACCT # ☐ MC ☐ VISA ☐ AMEX ☐ CHECK ENCLOSED EXP. DATE SIGNATURE

Mail to: THINK Technologies, 420 Bedford Street, Lexington, MA 02173. Or call 617-863-5595

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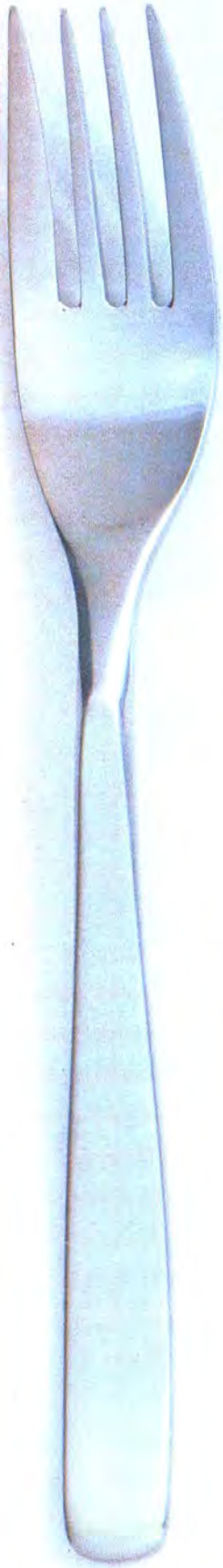
Money!



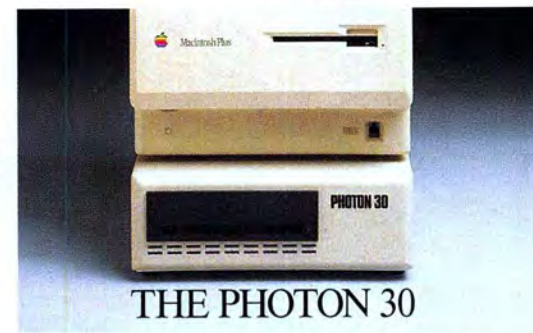
DIG IN.

Here at Warp Nine, we manufacture Macintosh products that excel in 3 areas: Price, quality and price. You see, we refuse to sell through computer stores. Instead, we sell direct. Saving you about 40%.

But when we left out the dealer's mark up, we didn't sacrifice the quality. For example, every Warp product comes with our Quality and Assurance Report detailing each step of production, signed by the person responsible for that step.

Our commitment to quality continues with our special fans. They keep our drives cool as a cucumber. Some manufacturers think fans are too expensive to install. That's why you can fry an egg on their drives. And Warp drives are delivered preformatted, ready to go. Just give them some juice and take off.

So if you're hungry for some big savings, roll up your sleeves, lick your lips and feast your eyes on these prices. They're awfully easy to swallow.



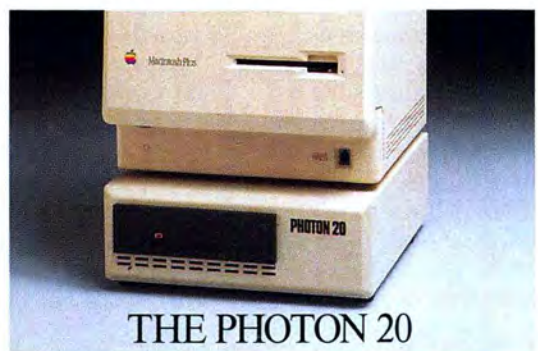
THE PHOTON 30

Our 31Mb external SCSI hard drive. Faster access and 50% more storage capacity than a 20Mb. Stores as much as 9300 double-spaced pages. Best of all, the Photon 30 is priced less than you'd pay for nearly every 20Mb drive on the market. MacPlus **$795.00** *512K with our PlusPort. **$945.00**

$795.00

COMPARE US.

	Photon 20	Data Frame	Apple HD20 SC	Hyperdrive FX-20
Fan	Yes	No	Yes	Yes
Avg. Seek Time	65	65	65	65
SCSI Compatible	Yes	Yes	Yes	Yes
HFS Compatible	Yes	Yes	Yes	Yes
Internal/ External	External	External	External	External
Price	**589.00**	1095.00	1299.00	1195.00



THE PHOTON 20

A 21Mb external SCSI hard drive. Store as much information as fifty-two 400K floppy disks. HFS and MFS compatible. Supports all your Macintosh software. Can daisy chain up to seven SCSI devises. MacPlus **$589.00** *512K with our PlusPort. **$745.00**

$589.00

THE PHASER 800

Whisper-quiet 800K double sided disk drive. Compatible with 128K, 512K, MacPlus and HFS. No hardware or software modifications necessary. Distinguishes 400K and 800K diskettes and will read and write to them accordingly. Features push button and automatic electronic ejection. Cable included. All models. **$199.00**

$199.00

THE WARP 20

A 21Mb internal SCSI hard drive for the MacPlus or 512K. The quiet, powerful cooling fan helps insure optimal operation. Our intelligent design and step-by-step manual make installation very straightforward regardless of your technical expertise. MacPlus version. **$849.00** *512K with internal PlusPort. **$849.00**

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INTRODUCING OUR SOFTWARE PRODUCTS.

The Fullback—Called the best back up program for the Mac. Backs up text and graphics from your hard drive to floppy disks very quickly. Volume back up (everything), file-by-file and incremental (last changes). **$39.95**

Print Sprint—A print spooler. Allows you to work on your Macintosh while your Imagewriter is printing. **$29.95**

Special Bundle Price—Buy any Warp product and get both **The Fullback** and **Print Sprint** on one disk. **$39.95**

THE TRANSPORTER 20

A 20Mb SCSI tape drive. Back up and restore the valuable data from your hard drive onto cassette tapes. Ensures safekeeping of all your applications and data (both text and graphics). Features volume, file-by-file, and incremental back up. With the incremental feature, back up daily files in as little as three minutes. MacPlus version. **$795.00**
***512K** with our PlusPort. **$945.00**

$795.00

TWO NEW MEMORY UPGRADES FOR THE MACPLUS.

Simply clip on with no modifications necessary. Both the **DataRam** and **MonsterRam** are fully compatible with all your software. Both come with our internal piezo electric fan.

DataRam—2Mb upgrade. Expandable to 4Mb. **$259.00**

MonsterRam—2.5Mb upgrade for a MacPlus with an internal hard drive. **$545.00**

* The Warp Nine PlusPort adapter puts a MacPlus type SCSI port on the back of your Mac 512K. It is included with each 512K price. This adapter allows you to connect our SCSI hard drive and tape back up to your 512K and transfer data at the high speed that the MacPlus does. No modifications. No soldering. Just Clip on. Very simple to install.

THE PHOTON 2001

A 21Mb SCSI hard drive and a 20Mb tape back up in one convenient unit. Store data on the hard drive then back it up onto your tape. Will back up a full 20Mb of data in under twelve minutes or changes in your files in as little as three minutes. Priced over $1,000 less than the AST 2000. MacPlus version. **$1495.00**
***512K** with our PlusPort. **$1645.00**

$1495.00

IF YOU'RE NOT HAPPY, WE'RE NOT HAPPY.

If you don't absolutely love your Warp product after 30 days, send it back and receive a full refund. What's more, if you have problems with your drive within 90 days, it's completely covered by our warranty. Return it and we'll send you a brand new unit. Immediately. And if you'd like a full one-year warranty, that's available for the asking, too.

All our products are also backed by a hand-picked technical support team. If you run into problems, just give them a call. Toll free. Each of them is a Mac expert, and they're here to answer your questions.

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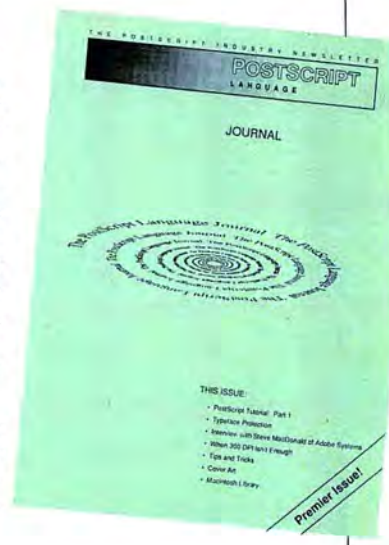
NEW ON THE MENU

SERIOUS ABOUT POSTSCRIPT

Since the introduction of the LaserWriter in 1985, many people have been attempting to learn to program PostScript, the LaserWriter's built-in language. And Since Apple's introduction of the LaserWriter, ten other printer manufacturers have announced that they plan on supporting the PostScript language. Now this emerging industry has its own newsletter, *The PostScript Language Journal*. Its aim is to allow people to learn more about PostScript and the products that support it.

Features in *The PostScript Language Journal* include how-to articles, product reviews, advanced programming techniques and a regular tips and tricks column. The premier issue includes an interview with Steve MacDonald, Vice President of Marketing for Adobe Systems, developers of PostScript. This initial issue also begins a PostScript tutorial that walks a programming novice through PostScript and its functions. This series will appear in all issues.

For more information, write to the *The PostScript Language Journal* at PO Box 5763, Parsippany, NJ 07054, (201) 445-0143. — *DS*



IS YOUR MOUSE INTO LEATHER?

Step aside Gucci, this is one market you missed. Capitalizing on your oversight, Pilot Enterprises has introduced Mouse-Hide, the designer mouse pad. This quality, genuine leather pad doesn't slip, fray or wear out. It also adds a classy touch to any desk top. Mouse-Hide was designed to permit continuous movement of the cursor and stop that annoying scratching noise. This mouse pad does have one drawback, though — it spots in the rain. But look at it this way: It's safe, all natural — and it looks good. Available for

$15 from Pilot Enterprises, Inc., 5699 Kanan Rd., Anoura Hills, CA 91301, (818) 706-1818. — *JH*

GETTING MORE FOR YOUR MONEY (or KEEP THOSE CARDS COMING)

Living Videotext has come up with an excellent reason to turn in software registration cards. Earlier this year the entire registered user base of *MORE* got a belated Christmas present: a free version 1.1 upgrade. They're even leaving the door open for those of you who haven't mailed the card in yet. As soon as you send in a 1.0 registration card your upgrade will be on its way, too.

MORE has grown to three disks with version 1.1: the system disk, which is the same as the 1.0 version; the program disk and the INational telephone directory, from General Information, Inc. The upgrade includes the sorely-missed Undo function, selective styling, multilevel bullet charts and a more flexible Dial Phone command. Living Videotext is obviously a company that listens to users. You can get in touch with them by writing to Living Videotext, 2432 Charleston Road, Mountain View, CA 94043. — *LK*

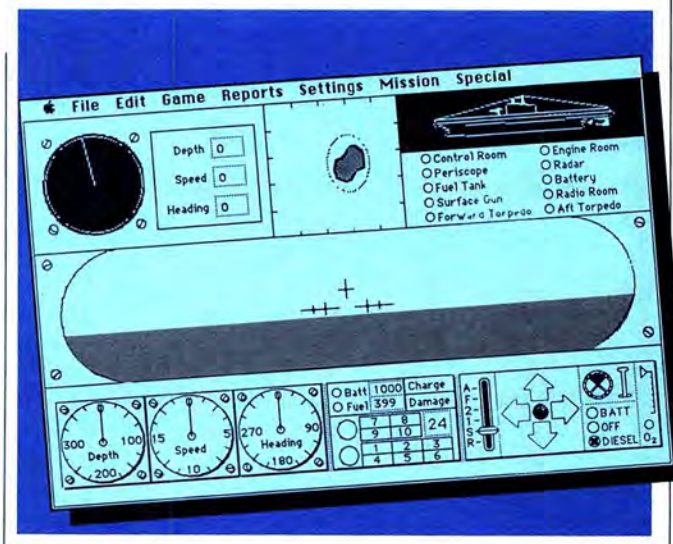
CAN YOU SPARE A RODIME?

Rodime is a company that manufactures hard disk systems for a variety of personal computers, including the Macintosh. Although you may not have heard much about them, if you use a hard disk it's possible that you have one of their products — with someone else's name on it. Until very recently, Rodime has not sold to consumers, but to other companies who bought the drive units, added a controller and software, then packaged the drive under their own name.

In a highly unusual and significant move, Rodime has established a peripherals division to build and market finished hard disk systems for the IBM PC and Macintosh under the Rodime name. The company is now shipping 20- and 45- megabyte SCSI drives for the Mac Plus.

The move is unusual because it puts Rodime in direct competition with the OEMs that buy the same drive units and repackage them. It is significant because Rodime is a large, well-respected company that has decided to plunge full speed ahead into the Mac market, thanks to the Mac's strong showing in business. According to Tim Mahoney at Rodime, the company feels there is no longer any question that the Mac will penetrate the business market — it's doing so right now.

The reason for the plunge is that the manufacturer is being relied on for more and more of the systems components, and wants to recoup some of their investment with the higher margins possible in the consumer market. — *MDW*



WE STAND CORRECTED

Our apologies to Spectrum HoloByte, the publishers of *Gato*, for letting a typo slip into the MiniFinder section. The price of the program is $49.95, not $39.95 as we previously listed it.

This excellent submarine simulation is a bargain no matter how you look at it. — *LK*

FROM PROGRAM TO POSTSCRIPT

PostScript seems to be making inroads everywhere these days. It's supported by over 200 software programs, from mainframe to Macintosh. The following list of Mac programs which support PostScript was taken from the October '86 issue of *Colophon,* the Adobe Systems News Publication.

WORD PROCESSORS
LaserScript/Plus (Wordstar, Multimate, Displaywrite 3 translator)
MacWrite
WriteNow
DESKTOP PUBLISHING
MacTEX
Glue
JustText
MacPublisher II
Mac Tex
MegaForm
PageMaker
ReadySetGo
ScenicWriter
Tech Tools
LetraPage
PS Compose
Ragtime
PRESENTATION GRAPHICS
Cricket Graph
FullPaint
LaserPaint
MacDraw
MacPaint
Microsoft Chart
MORE
GraphicWorks
SuperPaint
ENGINEERING GRAPHICS
Cricket Draw
Easy 3D
EZ-Draft
MacDraft
MacSpace
Mac3D
MacModel
MiniCad
Phoenix 3D
Professional CAD for the Mac
Tekalike
Mesa Graphics
DATA MANAGEMENT
FileMaker
Microsoft File
Microsoft Multiplan
Omnis 3
INTEGRATED SOFTWARE
Jazz
Microsoft Excel
Microsoft Works
PROJECT MANAGEMENT
MacProject
FONT PRODUCTS
Adobe Type Library
ClickArt LaserLetters
Fluent Laser Fonts
Fontographer
LaserFonts
LaserWorks
EDUCATION
Instructor
MUSIC COMPOSITION
ConcertWare +
Deluxe Music Construction Set
Professional Composer

LIFE IN THE BALANCE

If you find yourself, as I do, acting like Al Haig while playing *Balance of Power* you might be happy to know that there is now a book that teaches you the intricacies of geopolitics, and therefore, the game.

The 300-page book was written by Chris Crawford, the game's author. It includes many discussions of the relationships between the game and real life, often citing historical events for the situations that can occur in the game.

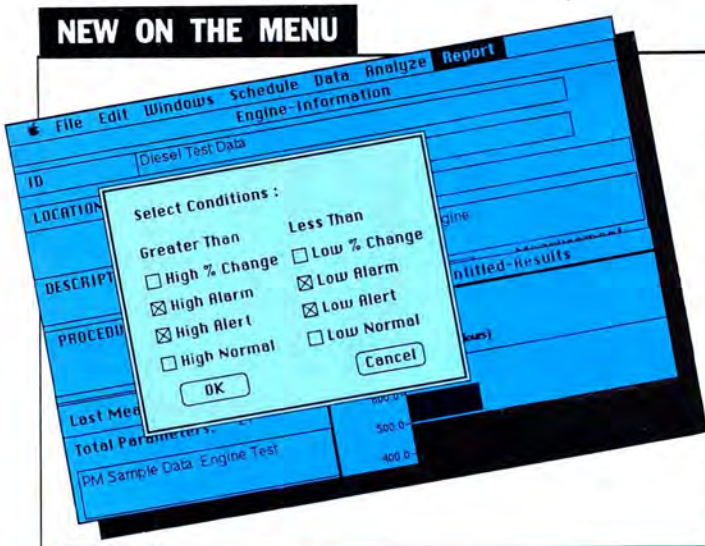
In chapters such as "The Wonderful World of Insurgency" and "Crises" you'll gain insight into geopolitical strategies. Other chapters, such as "Strategy for Balance of Power" and "How Balance of Power was Created" offer the aspiring Secretary of State advice of how to play a better game. This is a must-have for every *Balance of Power* player. No matter how adept at the game you already are, this book will make you better. — *DS*

RUMOR MANAGER

We hope that you've recovered from the HFS-MFS dislocations of 1986, because now there are going to be some new worries: screen size and resolution. This time the programs that already work will continue to, but many of them will look awful, sometimes to the point of unusability. Programs that rely on multiple windows to create their screen image and fixed, nonresizable windows will need extensive revision before they'll be usable on the new screens. And that doesn't take into account the effect of color. Which finally seems to be coming. . . . *dBase Mac* is going to be delayed until late in the year. Its problems will delay all the other Ashton-Tate Mac products. . . . Look for the next great telecommunications to come out of Southern California very soon. . . A new backup technology is just about ready for release. It will be disk-based, but very different from anything seen so far. . . . While the next Macs (the ones they should be announcing just about now) will be platinum (gray), there's a lot of dissatisfaction with that color, both inside and outside Apple. Look for yet another color change, possibly to something near the old beige, but a bit cooler, by the end of the year. . . . By midyear AI programs and expert systems worthy of the name will become available. Top of the line Macs will have 4 megs of RAM by then, and 2-meg machines will be common. . . . The run of great games from unknown authors and small publishers will continue, although the new color options will lure some of the big companies back into a market they had given up on. . . . . If the word VAX doesn't mean anything to you now, it will by the end of the year. Vaxen are very powerful DEC mini and superminicomputers, and they are becoming ever more connectable to Macs. Of course, the new Macs should be far more powerful than even middle-range Vaxen by then, but there are a lot of Vaxen out there. . . . The pull-down menu, highly graphic, multiple window Mac interface is going to be available in some strange places soon. MCI Mail and Western Union's EasyLink, for example. . . . Look for a big splash in presentation software, programs that let you skip the traditional time-consuming methods, while producing higher quality output than is currently available. Desktop presentations could be a bigger market than desktop publishing.

KAREN STOLPER

NEW ON THE MENU



YOU NEVER CAN TELL

It probably goes without saying that any piece of software is appreciated by the company that publishes it. But once in a while even corporate pride falls short in its assessment of a product. Case in point: *Parameter Manager* by Structural Measurement Systems. *PM* is a data analysis system that SMS thought would gladden the hearts primarily of engineers and other scientific types who specialize in gathering data and arranging it in various arcane forms. You know, a kind of vertical application with limited — if obvious — appeal. Well, the returns are coming in from *PM* users and at last count SMS had *24* vertical applications for the program. Satisfied users include a 300-store chain that uses it to keep an eye on their tills, a stockbroker who uses it to track stock performance and a food distributor who uses it to forecast commodities trends. SMS has even found an imaginative use of their own; they're analysing the frequencies of winning lottery numbers. — *LK*

BUG OF THE MONTH

Probably the worst kind of bug is a bug that doesn't rear its ugly head all the time. At first, we found it nearly impossible to get this *MORE* bug to reoccur. Finally it started to show up regularly.

This bug occurs when you are typing information into a document window. If you go back to insert text, after having typed at least three lines, each of over 62 characters, you'll get problems when inserting a single letter at the beginning of each line. This bug, however, produces irregular symptoms. And the symptoms don't always appear immediately. But when they do appear, they are certainly apparent. Bomb ID numbers, when bombs did occur, seemed to cover all possibilities. At times, everything locked up and the screen shimmied back and forth. At other times, the cursor just froze in place. On a few occasions, information just disappeared from view and then jumped back in place. Strange.

For feeding our hungry bug editors with this bug, Dr. Peter K. Stys of Willowdale, Ontario will be receiving a $25 check. Thanks. When you find your bugs, send those reports to Bugsy, c/o *MacUser,* 25 W. 39th St., NY, NY 10018. Don't forget to include all of the details, such as what *Finder/System,* what DAs, etc., and exactly how the bug can be reproduced. — *DS*

UPDATES

Programs, like people, change over time. To get the most out of your programs, you should be using the most recent versions. Here's a list of the current version number (as of press time) of many popular programs. The version number of a program can usually be found by running the program and checking the About... item at the top of the Apple menu.

Apple System software is special. Unless you have a 128K Mac, you should be running *System* 3.2. and *Finder* 5.3 (128K owners should continue to use *System* 2.0 and *Finder* 4.1). If you don't have the latest System and Finder you can get them free from an authorized Apple dealer. Be sure to bring in a blank disk or two, though.

The meanings of the codes in the right column are as follows: CP or NCP, copy protected or not; +, known to be HFS compatible; -, known not to work under HFS; S, shareware (try before you buy software); and 5, requires 512K of RAM.

Acta	1.2	NCP,+
Aztec C	1.06H.1	NCP,+
Back to Basics	1.03	CP?,+
Balance of Power	1.03	CP,+
BatteryPak	1.23	NCP,+
Business Filevision	1.1	CP,+
CalendarMaker	2.0	NCP,+,S
Chooser	2.3	NCP,+
ColorChart	1.3	NCP,+
ColorMate	2.1	NCP,+
ColorPrint	2.03	NCP,+
Comic Works	1.0	NCP,+
ConcertWare+	3.1	CP,+
Copy II Mac	6.3	NCP,+
Copy II HD	6.3	NCP,+
Cricket Graph	1.1	NCP,+,5
Desk Accessory Mover	1.4	NCP,-,S
Disk Express	1.06	NCP,+,5
Disk First Aid	1.0.1	NCP,+,5
DiskInfo	1.43	NCP,+,S
Disk Ranger	2.6	NCP,+
Dollars & Sense	1.4	CP,+
Dungeons of Doom	4.0	NCP,+,S
Easy3D	1.01	NCP,+
Edit	2.0	NCP,+
ExperLogo	1.1	NCP,+
Fedit Plus	2.0	NCP,+
FileMaker	1.0	NCP,+
FileMaker Plus	2.0	NCP,+
Filevision	1.0	CP,+
Finder (MFS-128K)	4.1	NCP,+
Finder (HFS)	5.3	NCP,+,5
1st Base	2.6	CP,
FlashBack	1.4	NCP,+
Flight Simulator	1.0	CP,+
Fokker Tri-Plane	1.0	CP,+
FONTastic	2.7	NCP,+
Font/DA Mover	3.2	NCP,+
Fontographer	2.1	CP,+,5
Front Desk	3.0	CP,+
FullPaint	1.0	NCP,+,5
Gato	1.42	CP,+
GrayPaint	1.4	CP,+,5
Hard Disk 20	1.1	NCP,+
Hard Disk Utility	1.28	NCP,+,5
Helix	2.0r11	NCP,+,5
Helix, Double	DH1r35	NCP,+,5
HFS Backup	2.0	NCP,+,5
HFS Locator Plus	1.4	NCP,+
ImageWriter	2.3	NCP,+
ImageWriter, AppleTalk	2.3	NCP,+
InTalk (was inTouch)	2.1	CP,+
Jazz	1A	CP,+,5
Just Text	1.1	NCP,+,5
Laser Prep	3.1	NCP,+
LaserWrite	3.1	NCP,+
LightSpeed C	1.5	NCP,+
LightSpeed Pascal	1.0	NCP,+
Lode Runner	1.0	CP,+
Mac-3D	2.0	CP,+
MacASM	2.0	NCP
MacBase	1.0	NCP,-
MacBillboard	4.01	NCP,+,S
Mac C	5.0	NCP,+
MDS	2.0	NCP,+
Mac Disk Catalog II	2.1.1	NCP,+
MacDraw	1.9	NCP,+
MacDraft	1.2a	CP,+
MacGolf	2.0	CP,+
MacInTalk	1.1	NCP,+
MacLabeler	2.2	CP,+
MacLightning	2.0	NCP,+
MacLink	1.14	CP,+
MacMoney	2.02	NCP,+
MacNosy V2	2.41	NCP,+
MacPaint	1.5	NCP,+
MacPalette	1.0	CP,+
MacPascal	2.1	CP,+
Mac +][	3.0	NCP,+
MacProject	1.1	NCP,+
MacProof	2.0	NCP,+
MacPublisher II	2.7	CP,+
MacServe	2.1	CP,+
MacSpec	1.3	CP,+
MacSpin	1.1	CP,+
MacSpool	2.1	NCP,+
MacTerminal	2.0	NCP,+
MacTools (MFS/HFS)	6.3	NCP,+
MacWrite	4.5	NCP,+
Mac Zap Copier	4.2	NCP,+
MailManager	1.0	CP,+
Measure Test	3.8	CP,+,S
MicroPhone	1.0	NCP,+
Micro Planner Plus	5.7	CP,+
MindWrite	1.0	NCP,-
MockPackage+	4.3.4	NCP,+,S
MORE	1.00A	NCP,+
MS BASIC	3.0	NCP,+
MS Chart	1.0	CP,+
MS Excel	1.03	NCP,+
MS File	1.02	CP,+
MS Fortran	2.2	CP,+
MS Word	1.05	CP,+
MS Works	1.0	NCP,+
Multiplan	1.1	CP,+
MusicWorks	1.1	CP,+
myDiskLabeler	2.11	NCP,+
Omnis III Plus	3.22	CP,+
OverVUE	2.0d	NCP,+
PackIt III	1.2	NCP,+,S
PageMaker	1.2	CP,+
PictureBase	1.1	NCP,+
QUED	1.51	NCP,+
Quick & Dirty Util., Vol. 1	1.6	NCP
Quick & Dirty Util., Vol. 2	1.0	NCP,+
Rags to Riches	2.6	CP,+
RagTime	1.0	CP,+
ReadySetGo	3.0	NCP,+
Record Holder	2.1	NCP,+
REdit	1.2	NCP,+
Red Ryder	9.4	NCP,+,S
Reflex	1.0	NCP,+
ResEdit	1.0.1	NCP,+
Sargon III	1.0	CP,+
SideKick	1.11C	NCP,+
Silicon Press	1.1	NCP,+
Slide Show Magician	1.3	CP,+
Smartcom II	2.2B	NCP,+
SoundCap	4.3	CP,+
SpellNow	1.0	NCP,+
Spellswell	1.3	NCP,+
StatView 512+	1.0	NCP,+
StatWorks	1.2	NCP,+
STELLA	1.1	CP,+
Studio Session	1.2	CP,+
SuperPaint	1.00	NCP,+,5
Switcher	5.1	NCP,+,5
System (MFS-128K)	2.0	NCP,+
System	3.2	NCP,+
Tempo	1.1	NCP,+
ThinkTank 512	1.3	NCP,+
Thunder!	1.0.1	NCP,+
Thunderscan	3.2	NCP,+
TML Pascal	2.01	NCP,+
TMON	2.585	NCP,+
Top Desk	1.5	CP,+
TurboCharger	2.0	NCP,+
VersaTerm	2.1	CP,+
VideoWorks	1.1	NCP,+
Word Handler	1.6	NCP,+
WriteNow	1.0	NCP,+
ZBasic	3.02	NCP,+

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"Despite our best efforts to disrupt **MacServe**, we failed. **MacServe's** automatic crash recovery system was able to recover from the worst network disasters we could throw at it and never lost any data. We could reestablish network connections quickly and without any elaborate recovery procedures. This is a remarkable achievement for such a complex product with so many opportunities for data loss."

"We are impressed and can't imagine what more could be done to make **MacServe** bullet proof."

INFOWORLD
November 17, 1986

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503 226-3620

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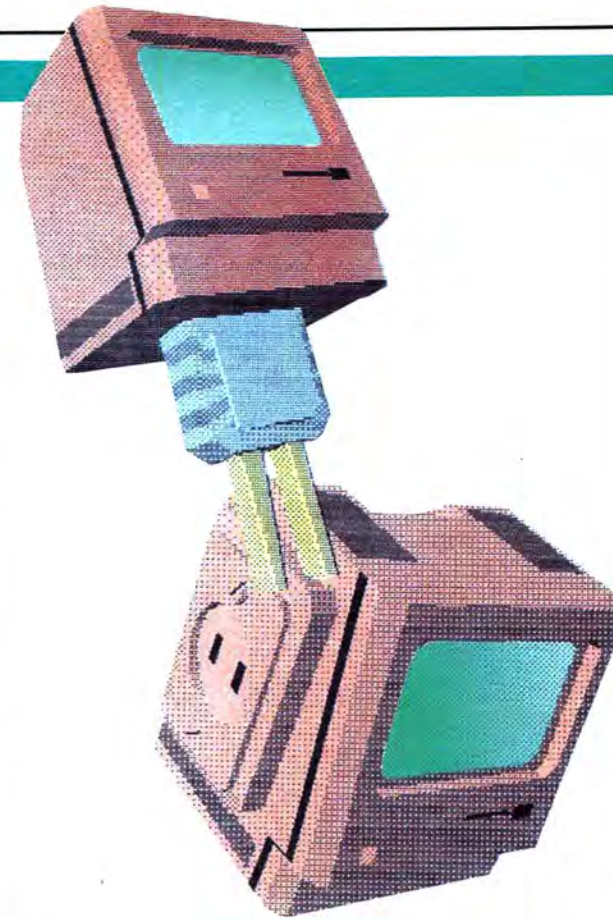
THE BEST-CONNECTED COMPUTER

Two major events for Macintosh took place in January — the MacWorld Expo and the Seybold Desktop Communications Conference, both in San Francisco. While Apple didn't announce any new computers (don't panic), the company did show several significant new products in the desktop communications area. The most important of these was *AppleShare,* Apple's *long*-awaited file server.

AppleShare is a 100 percent software file server, which means that it can be used with any Macintosh storage device instead of being tied to a specific, dedicated hard disk. It allows several Macs connected on a network to share the same hard disk, work on the same files and share the same data. The Macintosh's lack of this ability in the beginning certainly had an impact on its slow acceptance in the corporate community. The appearance of *AppleShare* moves the Macintosh one step closer to being the ideal desktop workstation in a business work group.

Apple also announced and showed the AppleTalk PC card, a plug-in card for the IBM PC and shirttail relations. The AppleTalk PC card lets PCs be hooked into an AppleTalk network. A software utility that goes with the card lets the user print directly from MS-DOS computers to the Apple LaserWriter. The AppleTalk PC card is something of a "crossover" product— besides its importance to desktop communications, Apple hopes the PC-LaserWriter link will help the company maintain its leadership position in desktop publishing against some very stiff competition.

With two other products, one for DCA file conversion and the other a link to IBM 3270 computers, Macintosh may well be the best-connected personal computer in the business. — *MDW*



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THE BETTER NEWSLETTER

Some temptations are more than simple desires — they are elevated to the status of irresistable force. Chocolate, for example, commands respect, adoration and total submission of the will. For Macintosh people, the newsletter has become the latest irresistable force. There are those who should resist the temptation to create a newsletter, but these people cannot help themselves and fall prey to the overpowering force. The result is sometimes very good, but in some cases the final product is not quite what the missionaries of desktop publishing promised it would be.

Anyone who has assembled a newsletter, even using a Macintosh and DTP software (*MacPublisher II*, *ReadySetGo*, *PageMaker*), is lucky to retain any hair and self identity by the end of the process. Newsletters can be tough if you don't have a pretty good understanding of design principles, or a flair for the outrageous.

Aldus (the *PageMaker* company) has an idea to help — of course it will cost, but that's the American way. It's a package called *PageMaker Portfolio: Designs for Newsletters*. It includes two disks with 21 newsletter templates and a superbly illustrated 114-page manual that explains very nicely how to do a good newsletter and how to use the templates provided. This is the first of a series of *PageMaker Portfolios* intended to help with specific types of publications.

Designs for Newsletters is $79 through authorized *PageMaker* dealers. If you have a publishing need that could benefit from a *PageMaker* template package, send your suggestion to: Aldus Corporation, Attention: Template Marketing Manager, 411 First Avenue South, Seattle, WA, 98104. —*MDW*

MACINTOSH TO SHOW

The English and Americans may be, as someone once said, two countries divided by a common language, but they're soon to be united by a common computer. Or words to that effect.

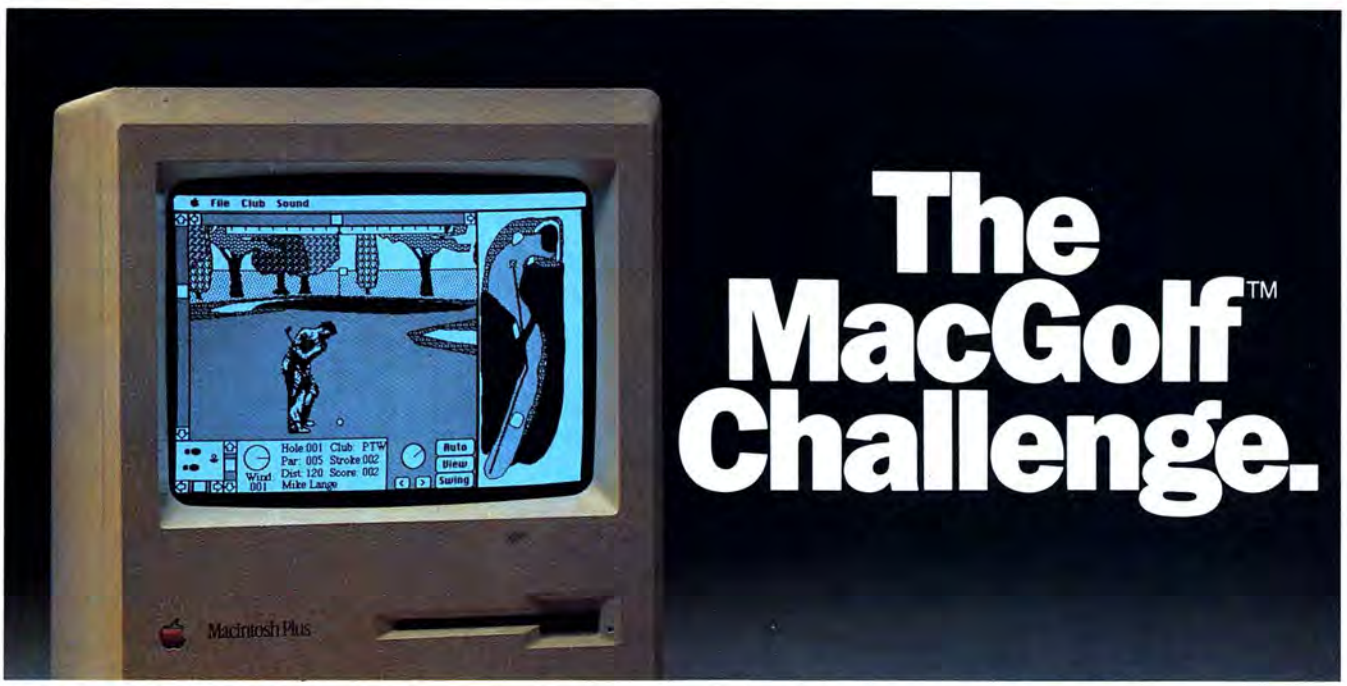
Quantam Research, a company specializing in organizing machine-specific shows and exhibitions, is producing the Macintosh Independent Conference & Exhibition (MICE) 87. This three-day conference in May 1987 will be the first of its kind in the United Kingdom and will give American manufacturers an opportunity to strut their stuff for a whole new group of Macintosh users.

According to Iain Norton, the show's director, "By May, the Macintosh users in the U.K. may have grown as much as 50 percent over the current installed base, if the present growth rate is maintained, and those new users in particular are going to need a show like this to get to grips with the products."

MICE 87 will run from 14th-16th of May in London and you can get more information by calling Iain Norton or Frank Gouws (if you can pronounce their names) on (+44) 1-403-1473. Besides all the informational benefits of attending, spring is a good time to visit London. — *LK*

JAZZ FOR A SONG

Jazz release 1A, a pretty good program (if you have at least a Mac Plus) can be had for under a $100 from New York City's 47th Street Photo. The low price is the result of a very large volume purchase by 47th Street, and will last only as long as copies remain. Other large dealers may have similar prices as Lotus attempts to breathe life back into *Jazz*. At $100 (or less) *Jazz* is a superb buy.—*SB*



Sit down, boot up and find yourself surrounded by the sights and sounds of the fairway – with MacGolf, the premier simulation golf game for Macintosh™ users.

MacGolf challenges beginners and experts with 3-dimensional animated golfers and graphics, realistic (digitized) sound effects, and two 18 hole golf courses. Up to four people can play.

MacGolf works on a 512K or Macintosh Plus and costs only $59.95. Get MacGolf at your nearest dealer today. Or call Practical Computer Applications at (612) 427-4789.

MacGolf™

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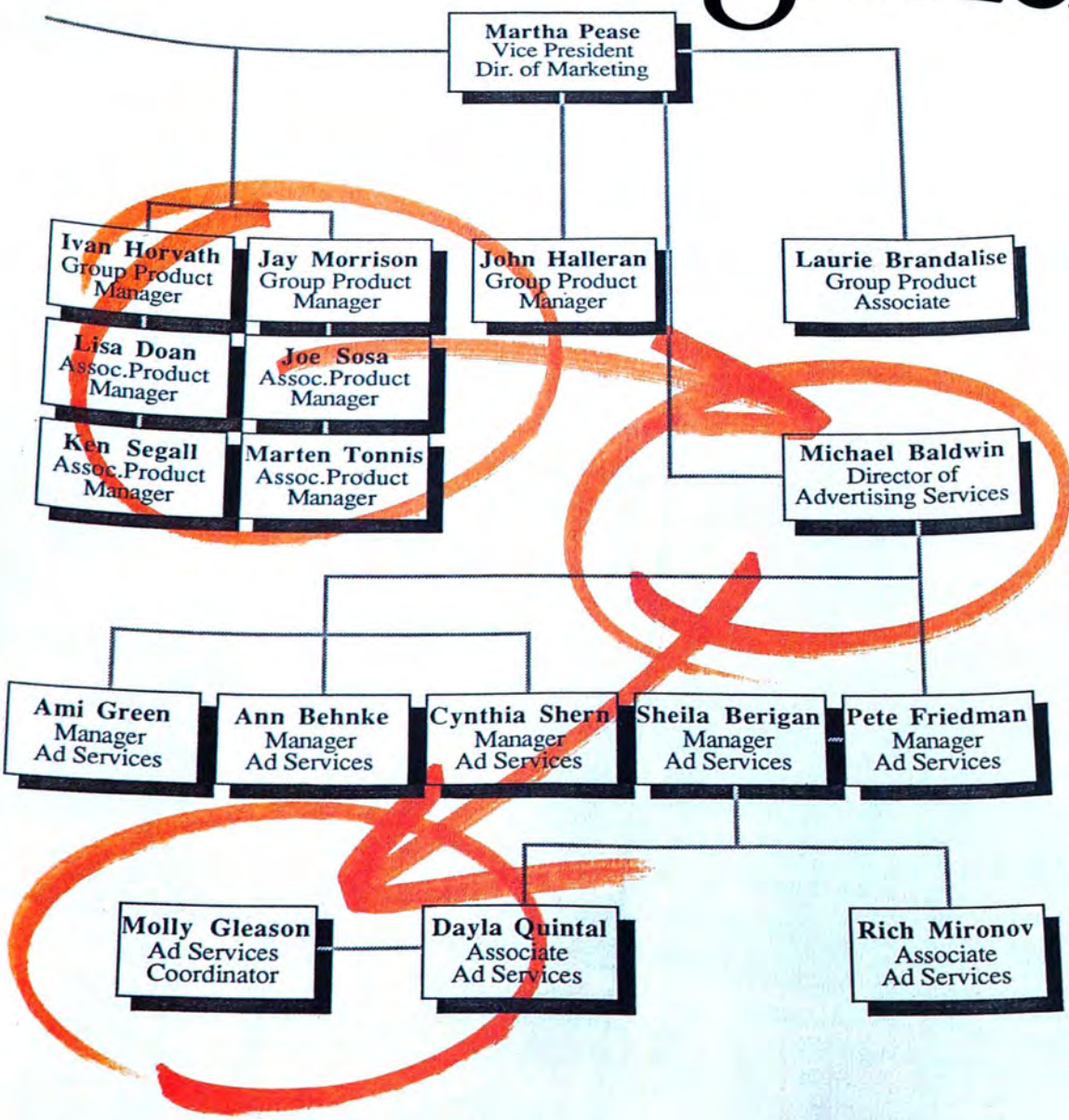
How to get people who work together to work together.



INTRODUCING APPLESHARE.

You've heard the talk about the future of personal computing.

About how Desktop Communications will change the way we work together. Let us share important documents. And allow us instant access not only to information, but to each other.

Well, enough talk.

AppleShare™ is here today.

All for one and one for all. With the AppleShare system, the workgroup's documents are yours for the asking.

It's a new file-serving system designed to build on the power of the AppleTalk® network. So each person can share information with other individuals, groups of people or everyone in the organization.

But what's truly revolutionary is how it works—just like a Macintosh™ personal computer.

The system utilizes a Macintosh with virtually any hard disk as a file server, so sharing is easy. Simply put a document into a folder, and it's available on the network. Instantly.

In fact, to use AppleShare, you need only a fleeting familiarity with two of the most basic Macintosh skills.

Pointing. And clicking.

THE FREEDOM OF INFORMATION ACT.

Every time you create a document, AppleShare lets you decide how (or if) it's to be shared.

Thanks to AppleShare access control, you can grant rights to specific individuals, at three different levels: 1) see folder, 2) read documents within a folder and 3) make changes.

And each folder will contain the most recent versions of the work within. Because the system is constantly updating itself.

ALL TOGETHER NOW.

Apple Desktop Communications can do wonders for productivity, beyond merely sharing folders.

Using a program like InBox, one person can easily send electronic mail to anyone on the network. Or just as easily, to a pre-defined list of people. And these messages can include complete documents, such as those created by Microsoft Word or Excel.

With this new power, Apple Desktop Publishing becomes a whole new ballgame. Because quickly and electronically, you can collect the information you want to publish. Even from people who don't use Macintosh.

INTRODUCING THE APPLETALK PC CARD.

Now you can communicate with other forms of intelligent life.

Just plug our PC Card into an MS-DOS-based computer, and it too can become an active part of the AppleTalk network.

Then, using a program like InBox PC, ideas that are conceived

Now even your MS-DOS computer can become a card-carrying member of the AppleTalk network.

in the MS-DOS world can be painlessly transferred to a Macintosh.

Where they can be analyzed more deeply. Studied more insightfully.

And, with the able assistance of an Apple LaserWriter® printer, presented far more brilliantly.

TURN KNOWLEDGE INTO POWER.

Once you've begun sharing information within the workgroup, you'll likely thirst for greater power.

Which, as it just so happens, is readily available.

You can bring others into the group, via AppleTalk cabling, phone lines or fiber optic cabling. Link a number of workgroups together with options like Hayes InterBridge.

Or, with FastPath and EtherSC, even tie the whole company together on Ethernet cabling.

The full power of Apple Desktop Communications can be yours today.

And to get going, there's only one thing you have to do.

With Apple Desktop Communications, you can share information amongst a group of computers, including even those of the MS-DOS variety.

Start communicating:

Call 800-538-9696, Ext. 700, for the name of a participating Apple dealer near you.

The power to be your best.™

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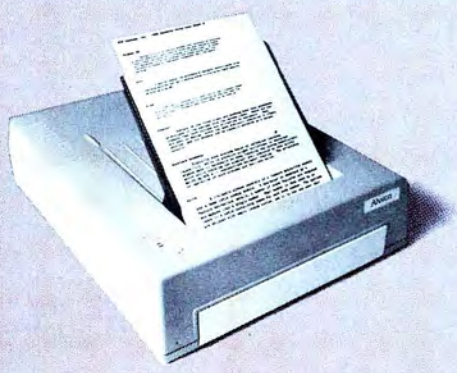
An "i" for an "i."

Or a "t" for a "t." In fact, any letter or number you can think of.

Because the Abaton Character Reader (ACR) gives you the ability to "read" documents right into your Macintosh.™ From there, using the appropriate word processing software such as MacWrite,™ Microsoft® Word and others, you can create all kinds of documents, newsletters and reports.

Our new optical character recognition analysis approach means our ACR system can read hundreds of typewriter and printer typefaces and styles, including proportional typefaces. Plus bold and underlined characters. And it can read character sizes anywhere from 6 to 12 points—even if they're on the same line.



There's a sheet-feed ACR system that allows you to scan up to 10 pages sequentially. Automatically. And we also offer a flat-bed unit that allows you to scan directly from bound documents—without removing the pages.

Every Abaton ACR comes with our powerful C-Scan scanning software. This gives you the ability to scan line art and half-tones at 300-dot-per-inch resolution—images perfect for use with today's page composition programs and laser printers.

With the Abaton ACR, you avoid the time-consuming procedure of manually typing documents into your computer. Just queue up the pages and go. It's that simple.

If you'd like more information on the Abaton ACR or any of our other high-resolution scanning systems, contact Abaton today at (415) 463-8822. Or visit your local Abaton dealer (authorized IBM, Compaq or Apple dealer) for details.

The Abaton ACR.

It's just what you need to give your Macintosh a little extra character.

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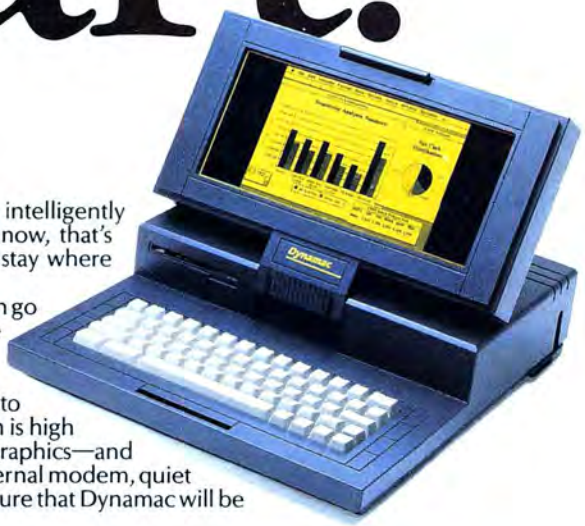

Introducing DYNAMAC. Because the world of information doesn't sit still.

Your Macintosh™ Computer has moved you easily and intelligently through a full spectrum of desktop solutions. But, until now, that's where the movement stopped. Desktop solutions had to stay where your Macintosh did—on your desk.

With the introduction of Dynamac, however, solutions can go wherever problems or opportunities are. Not just because of the Dynamac's small, sleek physical dimensions but because of its very big performance dimensions.

Up to 40 megabytes of hard disk storage and up to 4 megabytes of main memory are built in. Dynamac's screen is high resolution gold Electroluminescent—equal to the finest graphics—and displays 46% more information than the Macintosh. The internal modem, quiet fan, high-grade surge protector and many other features ensure that Dynamac will be an office-quality resource wherever it goes to work.

Moves.

Where Macintosh leaves off, Dynamac is picked up... packed with features and packaged in a sleek black case. It goes easily across town or across the country; it comes home with you as naturally as your briefcase.

Dynamac is a hardy traveler, but also one with savoir faire. The internal 300/1200 Baud modem operates on both U.S. and CCITT international standards; compatibility at 110/220 volts, 50/60 Hz is built in...as is an E-Machine interface for a direct connection to the Big Picture™ monitor.

Dynamac is available in more than two dozen different configurations—with prices starting at just under $5,000. All options and upgrades come from a single point of warranty.

Dynamac. It lets you leave the office without getting left behind.

For additional information, please contact Dynamac Computer Products, Inc., 1536 Cole Boulevard, Suite 252, Golden, CO 80401. (303) 233-0305.

Dynamac

Because the world of information doesn't sit still.

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GIVE YOUR SOFTWARE A GOOSE.

Now that software companies have discovered Mac's graphics interface, their products have become a lot more useful. Because now you can add pictures to your documents. And you know what they say about one picture.

That's where ThunderScan® really becomes valuable. Because ThunderScan can turn most printed images into high-resolution Macintosh graphics. Which means you can insert quality graphics into your files. Making your programs perform like never before.

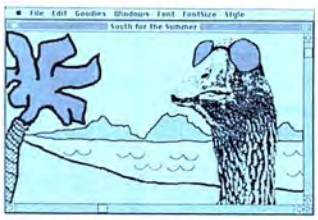
ThunderScan and MacDraw

ThunderScan and PageMaker

Programs like PageMaker,™ GraphicWorks™ and ReadySetGo™ for desktop publishing. With ThunderScan you don't have to rely on your own artistic abilities or someone else's clip art disk. Instead, you can illustrate your words with just the right graphics (even one-of-a-kind items like your logo or your own portrait). Improving both the professional appearance and readability of your publications.

Use ThunderScan with Business Filevision,® dBASE® Mac or Filemaker™ Plus to add pictures and photographs to your data, for more complete, more informative databases. It's perfect for research, real estate portfolios, personnel files — any time you're working with more than words or numbers.

ThunderScan and Business Filevision



ThunderScan and FullPaint

For those who view Mac as a blank canvas, ThunderScan is an exciting new artistic tool. Not only can you create elegant works of art with ThunderScan's powerful image enhancement software, you can really get wild with SuperPaint and FullPaint.™

And that's just the start. ThunderScan can boost the performance of MacDraw,™ MacDraft,™ MacPaint™ — Mac-Anything! Plus, Thunderware's new optional $29 connecto makes ThunderScan Mac Plus compatible without a wall plug. So if you want to make the best of Mac software even better, take a gander at ThunderScan. At just $229 there's no better way to give your software a goose.

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ThunderScan

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by Robert R. Wiggins

ON POWER

Demographers say that high-powered executives are sports fans. But even if you're not a high-powered executive or a sports fan, by now you've probably seen Apple's new television ad campaign which began airing during the World Series. There are two sets of ads, one for the Apple II series (including the IIGS) and one for the Macintosh, all created for Apple by their new advertising agency, BBDO Worldwide, and its creative head, Philip Dusenberry.

The IIGS ads stress education and children, since that is the target market for the Apple II series. The linchpin of this campaign is a spot featuring the Graham Nash song "Teach Your Children" with shots of children learning all sorts of things, some of them on an Apple computer. There's also the "every student's nightmare" commercial with a young man arriving at school completely unprepared, but at the last moment before his academic career is ruined he wakes up from the dream and dashes over to his Apple computer. Another ad shows a young man drawing with his left hand while solving equations with his right hand (a stunning effect) to illustrate the combination of graphics capability with number-crunching ability of the IIGS. The campaign is well designed and well executed.

The Macintosh portion of the campaign is quite different. The "flagship" commercial is "Power," an incredible collage of images associated with power, with no real message other than that Apple computers deserve to be in the "power" category. The rest of the spots are designed to show how well the Macintosh fits into the business world.

One ad has two Yuppie-types talking after a game of squash or racquetball about careers, and one pulls a report out of his locker that will speed his way to the top. His opponent is stunned at the visual quality that he is assured was done in-house, and demands to know what kind of computer produced it. He isn't told, but we are: the Apple Macintosh. Another commercial has an executive seeing some hotshots from finance carrying their computers into the building. When he asks if employees are allowed to take company computers home, he is told no, that these hotshots are bringing their own computers *from* home. What kind of computer? The Apple Macintosh. Yet another spot is a look at Macintoshes in use at an office making new employees immediately productive as well as making a star employee out of "that guy you thought retired."

The campaign is startling and effective, two hallmarks of the work of BBDO and Mr. Dusenberry. BBDO had a hard act to follow, too, after the semi-legendary "1984" ad and the campaigns of Chiat/Day. But BBDO under Philip Dusenberry has a reputation for some very creative work, too. Dusenberry is responsible for the very successful Pepsi-Cola ads featuring Michael J. Fox, Don Johnson, Michael Jackson, and Geraldine Ferraro. The connection with Pepsi may have helped BBDO win the Apple business, considering the background of Apple chairman John Sculley.

But will the campaign convince businesses that the Macintosh has a place in the office? I, for one, think so. By placing the emphasis on people and results, like the LaserWriter output shown in several of the spots, the ads highlight the power of the Macintosh, as intended. The campaign also holds up well when compared to the IBM PC campaigns featuring the whimsical Chaplinesque character. For the first time, Apple appears more businesslike than IBM.

The ads do have one drawback, as pointed out by Gene Siskel and Roger Ebert when they "reviewed" the spots for an Apple sales meeting: the ads don't mention the name of the product enough. In most of the commercials, it is only at the very end that the name of the product is mentioned at all, and since the Macintosh itself is not seen in most of the spots, there is a chance that the impact of the spots will be lessened. But this is a minor point when compared with the overall quality of the campaign, which is remarkable.

JUST WHAT'S BEING SOLD HERE?

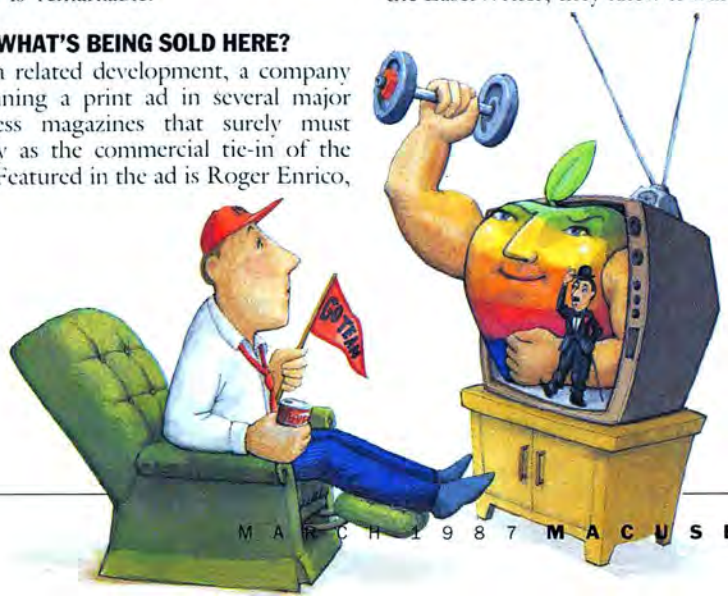
In a related development, a company is running a print ad in several major business magazines that surely must qualify as the commercial tie-in of the year. Featured in the ad is Roger Enrico, President and CEO of the Pepsi-Cola Company. On the table is a plate of fruit, a can of Pepsi, a copy of Mr. Enrico's book, *The Other Guy Blinked*, and an Apple Macintosh. The ad is for the Visa Premier Card, Visa's answer to the American Express Gold Card. But it may also be the most effective print ad for the Macintosh ever run.

POWER AND PERCEPTION

The new Apple ad campaign focuses on power. The power to get the job done. The power to excel. But the real problem with getting the Macintosh into the business world is not power, it's perception. The new campaign is designed to counter the perception that many business people cling to, that the IBM PC is more powerful than the Mac.

Apple is partly responsible for this perception. When the Macintosh was introduced, it had only 128K of memory, 400K floppy disks, and no provision whatsoever for attaching mass storage such as hard disks. After all, the Lisa was the machine for the business market. But the hoopla surrounding the Macintosh introduction compelled all the corporate types to go into the stores and check it out, only to find a woefully inadequate machine with a closed architecture that effectively prevented any outside companies from fixing its problems with add-ons. Not to mention the fact that it was slow. They came, they saw, they yawned.

Then came the 512K upgrades, the Lisa became the Macintosh XL, the LaserWriter debuted to rave reviews, and Apple launched a campaign to convince the business world that the Mac meant business. But many of the minds they were trying to reach were closed. They had decided that the Mac was a "toy" and weren't about to be fooled again. While they were impressed with the LaserWriter, they knew it was only a



BRIDGET STARR TAYLOR

matter of time before their trusty PCs could produce similar output. And the HP LaserJet was much cheaper than the Apple LaserWriter anyway, even if it wasn't quite as powerful. Besides, they said, hooking up hard disks to a printer port and using bizarre "drawer" schemes to get around file system limitations is not our idea of progress.

While all this was going on, Apple was acquiring some converts, even with the perceived deficiencies of the product line. Corporate art departments were laying in Macs, especially after the LaserWriter was introduced. Apple gets a very few big contracts, such as the well-publicized Peat Marwick deal. Macs mostly dribbled into the office.

Then came the Macintosh Plus. A megabyte of memory. A SCSI port for hard disks. Double capacity and double speed floppy disks. 128K ROMs that greatly improve the speed of some operations and that offer a hierarchical file system that makes hard disks usable. And the LaserWriter Plus, with more built-in fonts. Not only that, but there was an upgrade path for existing machines to get to the new technology. And sales picked up dramatically.

But what about those business people who had already come out twice to look at the "new" Macintosh? Apple had cried "wolf" before. How were they to be sure that this one really was different? After all, they had their PC-ATs now, with built-in hard disks and 1.2 megabyte half-height floppies. And their ATs were the fastest things in town. And even if *Excel* was the most powerful spreadsheet in the world, all they had to do was wait and Microsoft would come out with an IBM PC version.

It all comes back to perceptions. Business users perceive IBM as a more "serious" computer company than the upstart Apple, even though Apple has close to $2 billion in annual revenues. They perceive the Macintosh as a "toy" that Apple is trying to foist off on them as a business machine, even though there are dozens of powerful business programs for the Macintosh and some that are available only on the Mac. Business users perceive the IBM PC-AT as the most powerful computer available, even though the Mac Plus and the AT have been benchmarked in real-world operation and the Plus found faster in almost every category.

If Apple's new advertising campaign doesn't result directly in a single sale, but changes just some of these perceptions, it will be a success. An open mind is Apple's greatest ally.

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Media-Mate 3
with purchase of any 100 diskettes (Boxed in tens)

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3½" SS/DD .... **1.15 Ea.**
3½" DS/DD .... **1.69 Ea.**
Boxed in tens — minimum order 20 (FREE Media-Mate 3 with each 100)

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3½" SS/DD ..... **1.15 Ea.**
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BASF Or **Nashua**
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MAC PAC's — *Boxed in 50's*

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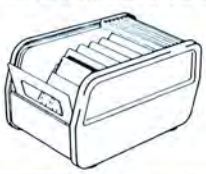

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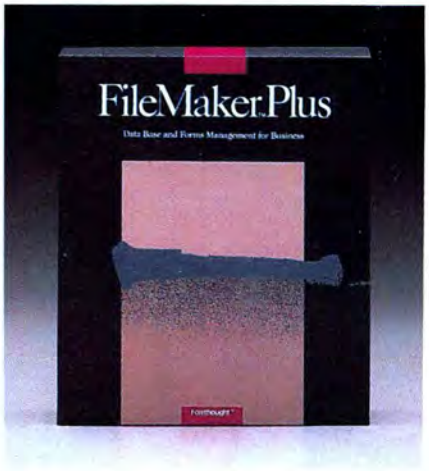

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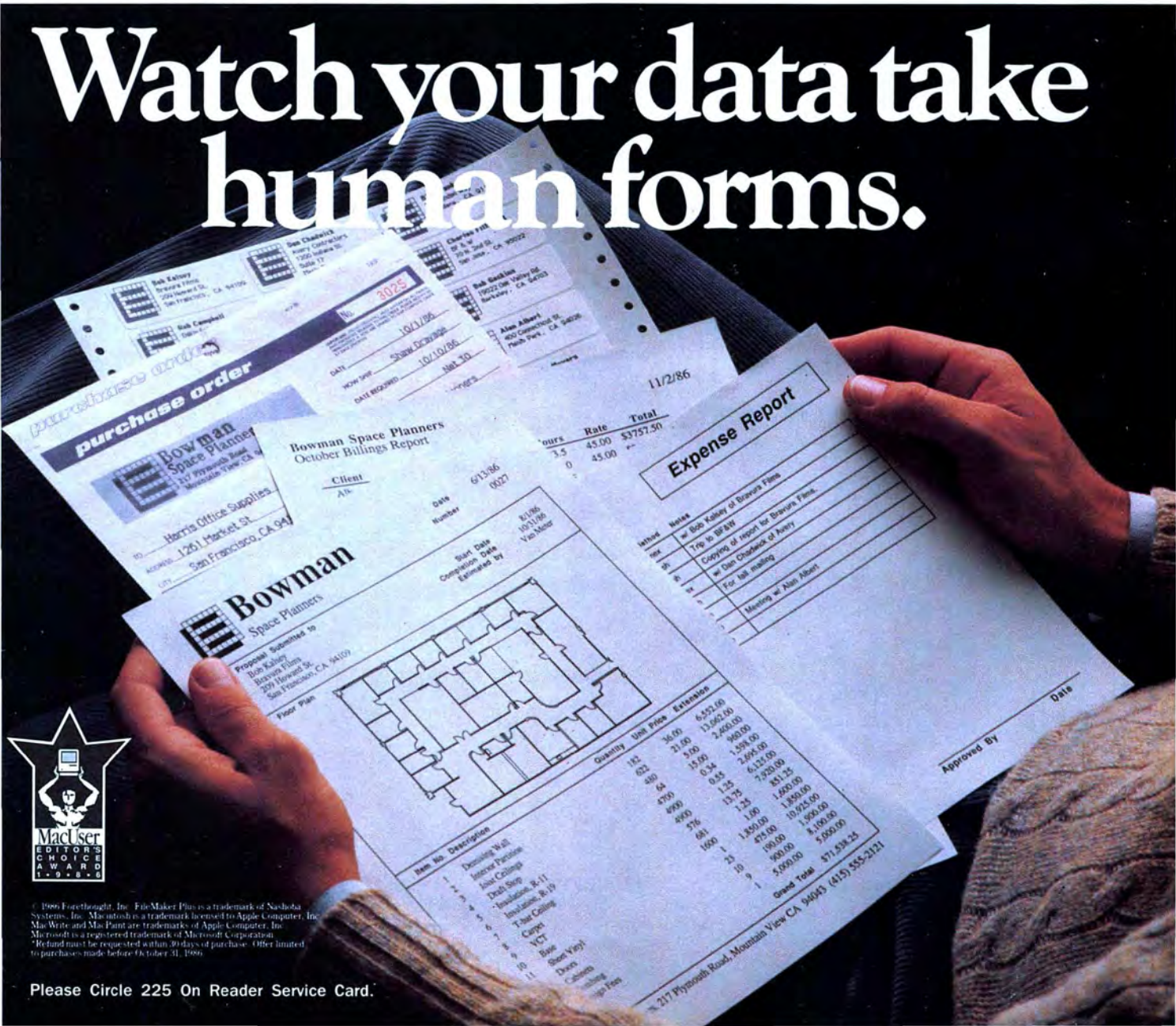

MacUser EDITOR'S CHOICE AWARD 1·9·8·6

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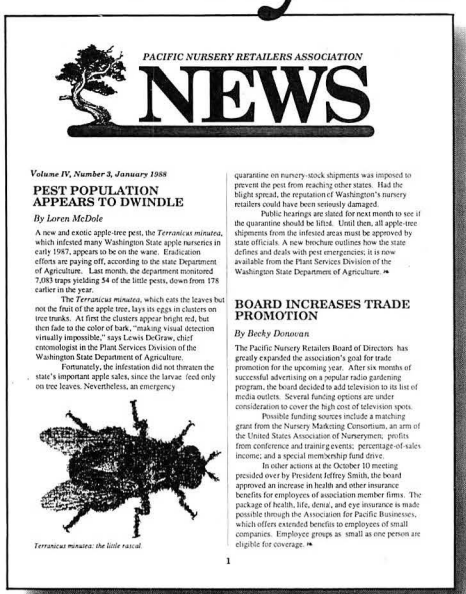

PACIFIC NURSERY RETAILERS ASSOCIATION

NEWS

Volume IV, Number 3, January 1988

PEST POPULATION APPEARS TO DWINDLE

By Loren McDole

A new and exotic apple-tree pest, the *Terranicus minatea*, which infested many Washington State apple nurseries in early 1987, appears to be on the wane. Eradication efforts are paying off, according to the state Department of Agriculture. Last month, the department monitored 7,083 traps yielding 54 of the little pests, down from 178 earlier in the year.

The *Terranicus minatea*, which eats the leaves but not the fruit of the apple tree, lays its eggs in clusters on tree trunks. At first the clusters appear bright red, but then fade to the color of bark, "making visual detection virtually impossible," says Lewis DeGraw, chief entomologist in the Plant Services Division of the Washington State Department of Agriculture.

Fortunately, the infestation did not threaten the state's important apple sales, since the larvae feed only on tree leaves. Nevertheless, an emergency quarantine on nursery-stock shipments was imposed to prevent the pest from reaching other states. Had the blight spread, the reputation of Washington's nursery retailers could have been seriously damaged.

Public hearings are slated for next month to see if the quarantine should be lifted. Until then, all apple-tree shipments from the infested areas must be approved by state officials. A new brochure outlines how the state defines and deals with pest emergencies; it is now available from the Plant Services Division of the Washington State Department of Agriculture. ❧

Terranicus minatea: the little rascal.

BOARD INCREASES TRADE PROMOTION

By Becky Donovan

The Pacific Nursery Retailers Board of Directors has greatly expanded the association's goal for trade promotion for the upcoming year. After six months of successful advertising on a popular radio gardening program, the board decided to add television to its list of media outlets. Several funding options are under consideration to cover the high cost of television spots.

Possible funding sources include a matching grant from the Nursery Marketing Consortium, an arm of the United States Association of Nurserymen; profits from conference and training events; percentage-of-sales income; and a special membership fund drive.

In other actions at the October 10 meeting presided over by President Jeffrey Smith, the board approved an increase in health and other insurance benefits for employees of association member firms. The package of health, life, dental, and eye insurance is made possible through the Association for Pacific Businesses, which offers extended benefits to employees of small companies. Employee groups as small as one person are eligible for coverage. ❧

MEGA VIEWS

Volume 1, Number 1
September 1986

The MEGA CADD Dealer Newsletter

Introducing: The first edition of MEGA VIEWS

Welcome to MEGA VIEWS, a special newsletter for the MEGA CADD dealer network. We hope you'll find MEGA VIEWS interesting, informative and, most of all, supportive of your efforts in bringing "the 3D standard" to the CADD marketplace.

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continued on page 2

It appears that everyone wants to link to the leader in 3D: Design Board Professional.

INVESTMENT VOL. IV NO. 2 JUNE 1987

INVESTMENT OPTIONS

MONEY MATTERS

OTC Investment Strategies Worth Considering

By Jonathan Hall

It's not the best of times for individuals investing in over-the-counter stocks. In May, the markets dropped almost 9 percent. In the last few weeks, prices for blue chip stocks have bounced back somewhat, but smaller companies trading on the OTC market have seen little activity.

"Particularly in the over-the-counter market, buy low."

Prior to the May slump, it looked as if individual investors could buy almost anything, then sit back and count their earnings. But in a sluggish market of level prices, profits are slow to materialize, so a wrong move can cost big money.

Yet, according to Bill Saks, whose *Saks Financial Report* comments on the performance of OTC portfolios, three companies scored respectable gains of 9 to 17 percent during this down period. The three firms — LA Research (Los Angeles), Market Masters (Dallas), and Loeb Performance Report (New York) — had similar investment strategies. Each looked for safe stocks at low prices in relation to earnings.

"Why buy blue chips at 30 times earnings because of their potential?" says Bill Burnett of Market Masters, who likes companies involved in food processing because their stocks are low-priced. Jay Loeb agrees: "Particularly in the over-the-counter market, buy low." Nothing, however, beats a bullseye, which is what Market Masters accomplished by recommending

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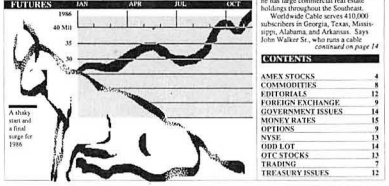
FUTURES JAN APR JUL OCT



A shaky start and a final surge for 1986.

Kaplan to Sell Its Cable Unit for $612 Million

By Christine Davis

Kaplan Johnson Investment Co., which bought out Worldwide Broadcasting, Inc., in 1984, has agreed to sell Worldwide's cable unit to Leslie M. Strauss Group for $612 million. The figure ranks among the highest price ever paid for cable assets and represents a cost of almost $1200 to each investor.

According to Kaplan Johnson, the Strauss Group will make the purchase through a joint venture with Bates Broadcasting and certain members of Worldwide's management staff. The cable sale is part of a continuing effort on the part of Kaplan Johnson to relinquish media holdings at significantly higher prices than it paid for them.

Leslie M. Strauss is a member of the Strauss family of El Paso, Texas. Besides his stake in Bates Broadcasting, he has large commercial real estate holdings throughout the Southeast.

Worldwide Cable serves 410,000 subscribers in Georgia, Texas, Mississippi, Alabama, and Arkansas. Says John Walker Sr., who runs a cable

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Madison General's

HealthFile

January 1988 Volume 9, Number 1

Outpatient Services Expanded

Renovation Increases Hospital Efficiency

Six years ago, Madison General faced serious space restrictions, which limited hospital services and slowed subscriber growth rates to less than 5 percent. The original elongated hospital design also contributed to staffing and logistical problems. At the time, Madison's board of directors selected a building plan that added a 10-story patient tower, while retaining several existing structures to save an estimated $20 million in construction costs. The combined plan costs $43 million, as opposed to $75 million for an entirely new hospital.

The design converts a total of 175,000 square feet into other uses, such as classrooms, business and administration offices, medical records storage, a pharmacy, a medical library, and a new auditorium. Additionally, small nursing units are replaced with more efficient larger ones, which alone may save Madison General $1.7 million a year.

The new hospital tower consolidates departments and shortens travel distances between areas of the hospital to solve problems associated with the old configuration. A recently completed survey shows that the tower combines to attract new physicians, and that outpatient services on the first floor have contributed to a dramatic rise in Madison's share of the market — from 33 to 55 percent. Says Madison General President Anthony G. Wells, "The end result of this major effort is taking us a modernized facility that can

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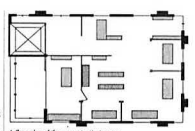


A floor plan of the new outpatient rooms.

In This Issue:

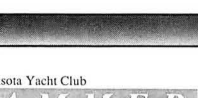
Workshop proves that exercise is not just for the young. Page 3

HealthNet launches its outreach program for the homeless. Page 4

Campaigns heat up as board elections approach. Page 4

Exercise Test Hits the Road

Madison General's nutrition and fitness workshops underscore the hospital's ongoing commitment to subscriber health. As part of that program, the hospital provides low-cost exercise-tolerance tests for anyone about to take up a vigorous exercise routine. Now, a new mobile unit provides the same high-quality stress tests to subscribers in outlying areas. If you're over 40 or have a family history of heart disease, you're a candidate for the exercise-tolerance test. One out of 10 middle-aged American males and a smaller percentage of women suffer from "silent" heart disease, which strenuous workouts could aggravate.



A new van conducts stress tests for outlying subscribers.

A stress test measures the heart's ability to supply oxygenated blood to working muscles. The procedure records the heart's electrical activity, while checking the vital signs during increasingly demanding exercise on an automated treadmill.

The exercise-tolerance test is not a definitive diagnosis of cardiovascular

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CONSTRUCTION MATERIALS

Factory-Built Housing

Sweden Takes the Lead

In an age of stricter building and energy codes, both here and abroad, factory-crafted houses are beginning to make sense. At least they make sense to Swedish home buyers, 95 percent of whom ordered their houses from factories last year. Sweden's 8 million inhabitants live on a land mass about the size of California. The country's small size and centralized government make decision-making a snap compared with state and federal regulatory procedures in the United States. One policy the government is currently pushing is independence from nuclear-generated electricity and the elimination of oil-fired home heating. This national policy has helped generate the sudden demand for the energy-efficient factory-built homes, in spite of their high cost.

Until recently, Swedish consumers, like their American counterparts, have been reluctant to purchase energy-saving features for their homes. But official pressure, coupled with the almost annual threat of an energy crisis, have convinced Swedes to open their wallets.

For the manufacturers, an in-house operation means lower design fees, which can be amortized over many units, and the

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VOLUME 12, NUMBER 4 FALL 1987

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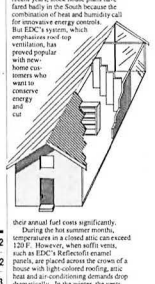
Housing in a Hot Climate

A growing number of home contractors in Southern states are using a new roofing system developed by the Energy Design Concern of Atlanta, Georgia. In recent years, stock house plans have fared badly in the South because the combination of heat and humidity call for innovative energy controls. But EDC's system, which emphasizes roof-top ventilation, has proved popular with new-home customers who want to conserve energy and cut their annual fuel costs significantly.



During the hot summer months, temperatures in a closed attic can exceed 120 F. However, when soffit vents, such as EDC's Reflectofit enamel panels, are placed across the crown of a house with light-colored roofing, attic heat and air-conditioning demands drop dramatically. In the winter, the vents are covered with inexpensive plywood doors that trap warm air to help heat the rooms below.

The roofing design works for homes with either cathedral ceilings or

Continued on page 4

The South Sarasota Yacht Club

WINDJAMMER

Issue Number 58, January 1988

Winning Form in Dominican Regatta

U.S. Team Surprises the World

The Americans seemed as shocked as anyone that they brought the Dominican Cup home for Christmas last month. They did so mainly through the sleek performance of their fast One-Tonner, *Tabu*, owned by Stephen Armstrong. Doug MacIntyre, 1983 Olympic silver medalist in sailing competion, skippered the winning boat, with South Sarasota yachtsman Dwight Burgess steering *Tabu* in the decisive second race.

The rest of the team, competing in two larger yachts, lagged painfully behind, but their final results were good enough to keep the Yanks ahead in the end. Larry Young's *Sunrise* (rated 32.0) was 16th; Mark Miller's *Four Sons* (35.2) was 18th.

Changing weather patterns made consistent sailing almost impossible. Although a good wind blessed contingers in the first race, which was run on an Olympic inshore course, a faint-hearted breeze marred the shorter offshore race for most of the teams. The brief gusts in the second race, however, worked to *Tabu*'s advantage, according

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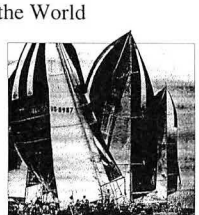

The valiant *Tabu*: upsetting expectations.

Foresight Forestalls Emergencies

Agile action such as crouching, crawling, and sliding backside-first is one way to keep body and soul above sea level. But it's not always enough, especially for a busy crew, which can sometimes overlook personal safety to get a job done quickly. And a stockpile of high-tech rescue gear may only lull an otherwise smart sailor into a false sense of security. The best hedge against a man-overboard emergency is careful planning.

One of the easiest and cheapest safety measures is extra 6-foot sail stops, which you can fashion quickly into temporary grab-lines. Sail-stop material, available from any sailmaker, is tough and virtually slip-proof. It knots well, and you can cinch it to the metal tubing of the pulpit with a rolling hitch.

In foul weather, additional makeshift grab-lines can quell the most experienced seafarer's fears. Climbing from the cabin to the cockpit, for instance, is a treacherous proposition, considering the likelihood of your being chucked overboard after standing upright. However, by securing sail-stop loops within easy reach on both sides of the cockpit, you can mitigate this danger.

If deck-top lifelines are incompatible with your boating style, or you require additional safety measures, the only alternative is a safety harness. But it's important to remember that, like rescue

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legal line

Volume 2 Number 6 January 1988

Family Law to Highlight D.C. Meeting

Carrie Johnson

Almost every attorney comes in contact with some facet of family law during the course of a career. But how it's more important than ever to keep abreast of family law statutes. This year, the state legislature passed the controversial Juvenile Justice and Family Law Reform Act, which is the focus of the state bar association's annual meeting in Washington, D.C., March 3-5.

The new legislation radically changes the philosophical underpinnings of the juvenile-justice law that has guided this state since 1911. The intent of the original family law was to allow courts to act in place of parents whenever abuse or neglect endangered a child's well-being or contributed to delinquent behavior. As the family courts evolved during the century, the emphasis on prosecuting and rehabilitating children grew in importance.

The new law, however, draws a sharp distinction between abused and delinquent children. While children in need of protection from indifferent or cruel caretakers are handled as before, delinquent youth are now held accountable for their actions in much the same way adult offenders are. Court proceedings are more adversarial in nature, the accused receive the full panoply of rights, and rules of evidence apply. Court proceedings for youthful offenders are open to the public and press — in line with legislative thinking that it is the public's right to know how the courts dispose of cases involving the criminally accused.

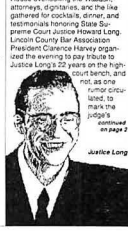
Still, legislators were not indifferent to the concerns of child

continued on page 2

An Evening with Justice Long

Frank Blackstock

On December 28, in Hilton House overlooking the Wabash, attorneys, dignitaries, and the like gathered for cocktails, dinner, and testimonials honoring State Supreme Court Justice Howard Long. Lincoln County Bar Association President Clarence Harvey organized the evening to pay tribute to Justice Long's 22 years on the high-



Justice Long

court bench, and not, as one rumor circulated, to mark the judge's

continued on page 2

Ownership Dominates Office Moves

Christina McCarther

The buzzword for law-office relocation in 1988 is equity. Owning your digs means controlling your economic and spatial destiny, while avoiding the costly chore of moving when business takes off. The value of such an arrangement is clear — it is estimated that construction costs for law firms alone can easily reach $70 a square foot.

Finding a building with the right location and space requirements, however, often proves to be an insurmountable obstacle. Affordable buildings with room for expansion usually include lofts or warehouse real estate outside the hub of the city — less than ideal accommodations for a growing firm. But fortunately, certain building trends in the '80s have worked to the advantage of professional industries such as legal services.

The most important of these is the almost non-stop high-rise office construction that has created a square-foot glut and left many developers shaking in their boots. The builder's dilemma is a tenant's delight — often taking the form of rent abatements, construction packages, and, yes, partial ownership.

An equity position for a law firm translates into tax write-offs, depreciation allowances, additional cash flow, and fixed rent for the life of the lease. Other fiscal

continued on page 3

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by Michael D. Wesley

ICON, ICON'T

In the year that would roughly equate to 68020 AD, a team of archaeologists began to explore a region thought to contain artifacts from the Silicon Age. The area, a few miles out from the coastline, was believed to have been a large, bowl-shaped valley once, before a massive earthquake created the Great Western Rift and splintered thousands of square miles of land into the ocean. Although there was as yet no hard evidence that a civilization had ever existed there, some scientists felt that there were enough references to a legendary silicon culture to justify a look.

The valley had probably been quite large, but the study team decided to focus on a small area known as Cu Erino. Here a fierce band of people was said to have lived with a society centered around a deity called "Macintosh." Stories had been told of great battles between the "Macs" and a larger, but less developed clan of blue, pin-striped warriors. The Macs had apparently been successful in what legend referred to as the Clone Wars, because almost nothing was now known of the rival group.

The area to be explored was several hundred feet below the surface of the Pacific Ocean so the archaeologists established several underwater base camps in airtight shells. They set out each day in teams to investigate formations identified by their computers. After several days of work the team had uncovered portions of what looked like a large building, exposing small sections of steel and other man-made materials.

Although the passage of years and constant erosion by the ocean had left very little for the study team to find, they were ecstatic to discover small remnants of silicon chips, printed circuit boards and hard disks. They were able to assemble enough bits and pieces to prove without a doubt that an advanced silicon age civilization had once thrived here.

The team was about ready to give up and head home when one of the divers found a passageway that appeared to lead to an airtight room, a space about 20 by 30 feet that was completely enclosed. It had apparently survived the earthquake, the nuclear holocaust and the ocean.

The study team instantly assembled an airtight shell with an airlock around the room. The doorway was uncovered and mounds of rubble cleared away, then the entire team gathered around and watched breathlessly as the leader opened the door. They all gasped as they realized that they had uncovered a workshop, with all sorts of strange little computer-like boxes lying about on tables. One of the explorers examined a box and almost screamed out loud when she read the name "Macintosh."

Stacks of disks were quickly investigated, and the archaeologists quickly developed an understanding of the culture that had formed around this little machine. They found that the culture relied heavily on the use of icons, small pictures that represented ideas and actions. Surprised, the team wondered if this society had really managed to develop to such an advanced state when they seemed to be just on the verge of moving from hieroglyphs to the written word.

One radical member of the group postulated that the process might have been going the other way — perhaps this culture had grown tired of words and was returning to hieroglyphics. His idea was given some credence, but the team knew that it would take years of studying to truly understand the Mac society.

TOWARD A NEW HIEROGLYPHIC

The use of icons has simplified our daily lives to an enormous degree. We can now travel around the world and find our way from place to place without bothering to learn the local language, thanks to international road signs with icons. We can find an appropriate restroom anywhere in the world by looking for the small male and female stick figures. And those of us who use computers extensively can thank Macintosh for icons that make it much easier to find, save and discard documents on screen, or to do any of a thousand other useful tasks.

The Macintosh has changed the way people look at and think about information by drawing on the ancient concept of pictographs. I can't help wondering what the increasing use of icons in modern culture really signifies about language, thought and the search for meaning. This could lead to an interesting investigation, but the real purpose of this column is to raise the discussion of icon as symbol versus word as symbol.

Icons are great. While a picture may not always be worth a thousand words, a clear, well-conceived picture can often take the place of twenty, or a hundred, or a handful of words, and is often easier to deal with than the words it replaces. Sometimes, but not always, a picture is even effective as a stand-in for a single word (note the reference to restrooms above). But it should be remembered that an icon is a representation of a *thing*, an *action* or an *idea* — not of words. Because words are themselves merely symbols that stand for things, actions — you get the idea.

What brought this on is the feeling that some icons, while painstakingly

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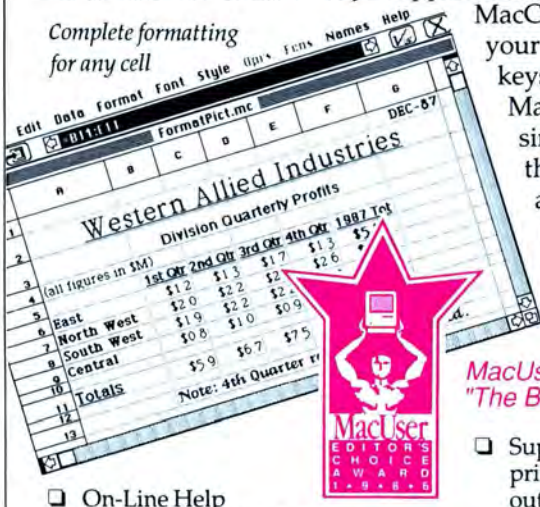

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crafted, are a pain to figure out. Specifically, I become concerned when I see software developers (and, truth be known, road sign makers and other iconographers) stretching their imaginations to find an icon that simply isn't needed.

A few months ago, one developer came to show me a new product, heavy in its use of icons. At one point I simply stared at the screen for several minutes, trying to make sense out of an icon that the program used to represent an action. The icon was an inverted pyramid made up of five rectangles. I couldn't fathom it, so I asked the developer what it meant. He laughed a bit nervously and shrugged his shoulders. It appeared that I wasn't the first to ask this question.

"We've had a lot of problems with that one," he said. "It's supposed to be a toolbox, but it's not a very good one. We thought about using a pair of pliers or something like that. I don't know — if you can think of a better way to show "tools" we'd give it a try."

I thought hard for about a tenth of a second, then drew for him the symbol that I thought best represented tools. It looked something like this:

TOOLS

The Macintosh is designed to be easy to use. Its interface employs icons because *sometimes* icons are easier to make sense of than words. But (and in case you hadn't noticed I consider this a significant but) sometimes a word is the clearest, simplest, very best symbol that you can use to convey meaning. Let's not forget that. After all, hieroglyphics died out in the first place at least in part because you can do some things with words that you can't do with pictures.

WHY NOT TRY THIS?

Along the same vein, an idea came to me while I was trying to make a seven-pointed star with even sized points. I had a heckuva time doing it. When I couldn't make my little star look right on screen, I tried to draw the thing by hand on a piece of scrap paper and realized that the easiest way for me to do it was to draw one point then rotate the page and draw the same point again in a different position. I couldn't help wondering whether some types of drawing might be easier if graphics software would let you rotate the page on screen instead of worrying about rotating an object on the page. I don't think it's been done, and it might be worth a try.

Sometimes — even in an age of advanced technology — the old ways are still best.

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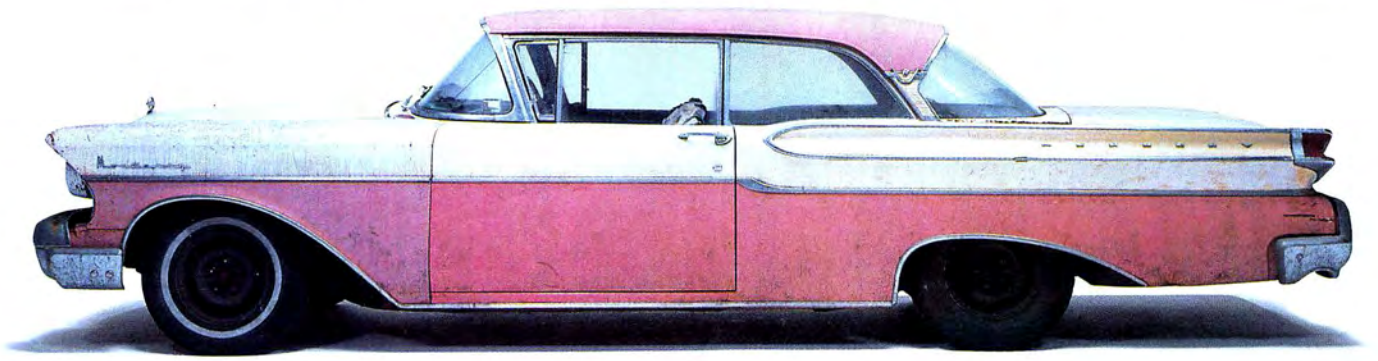

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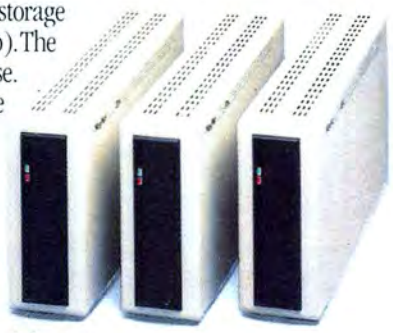
Our products are selling to companies like Honeywell, AT&T, 3M and Apple. Yet we've also pleased some companies that you probably haven't heard of. Like Don's Dog Service, Anderson's Nursery and Himalayan Expeditions. Who knows, maybe now that they have the right tools, these companies, too, will become household words.

MAGNET 20X, 30X AND INTRODUCING THE 40X.



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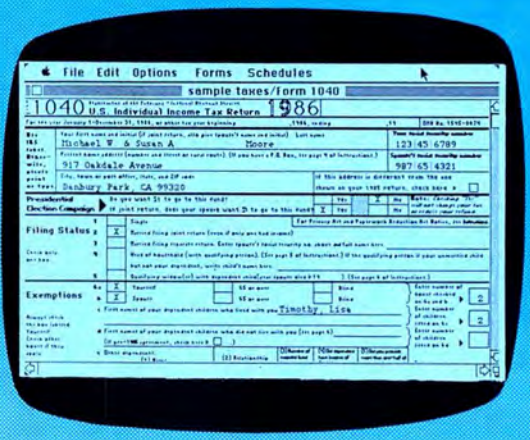

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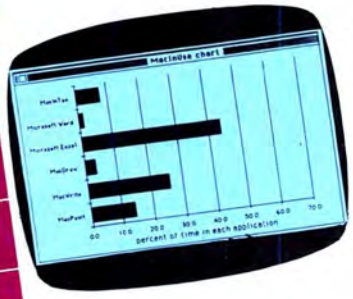

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THE MACINTOSH TRACKER

TRACKS THE USAGE OF YOUR MAC

by Doug Clapp

CALLING ALL MACBOTS

Had a great weekend. Managed to land both the Cessna and the jet in *Flight Simulator* (though not on the runway — jeez that's tough!) And my eight-year-old got a great wife, wealth, and three lovely daughters. In *Alter Ego*, that is. A great program; too good to be called a "game."

For both of us, it was "life as simulation."

But let's talk fish.

My living room is walled with bookcases. So's the dining room. And the study. I haven't read all the books, just some. Of the books that I have read, I remember very little. Hardly anything. The mind as sieve. It's frustrating and sad. So many books; so little time; so few brain cells.

But the desire's there, if not the time or the brainpower.

As with books, so with fish. I've got a friend with a boat and a snazzy "Fish Finder." The Fish Finder is marvelous. A 13-inch color display. Lots of knobs on the front to play with. Put the transducer under the boat, wire the Fish Finder up to the boat's battery, and you're off.

The Fish Finder shows the lake bottom. It also shows fish. The fish display as colored globs on the screen. And here's a neat thing: the redder the glob, the bigger the fish.

So you can cruise across a lake and see fish! You can see schools of fish, big fish and little fish. You can see how deep they are and make good guesses about their species.

Our family has a cabin on an island, on Lake of the Woods, in Ontario. It's a huge lake. Lots of fish.

My favorite fish is the sturgeon. They're big fish: often 100 pounds or more. Often 6 feet long. They live on the bottom, eating sludge, probably.

Some say there are no sturgeon in Lake of the Woods. Some say they're down there. That's why I love the Fish Finder — the "Sturgeon Finder." I don't want to catch a sturgeon (not an easy task anyway); I just want to know if they're there!

But neat as the Fish Finder is, it's not a Macintosh. The Fish Finder is a simple-minded thing.

The Macintosh is an extraordinary thing.

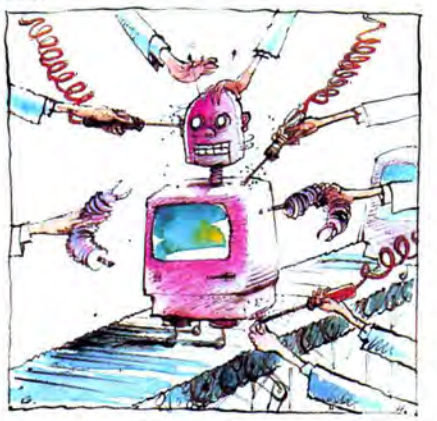
But it doesn't have a transducer to look at fish. And it doesn't have wheels. And it doesn't have arms.

I don't want to do spreadsheets or sort records. Or even draw pretty pictures or "flow text" throughout a newsletter.

I want a Macbot. To go off — if not after sturgeon — and check on the deer in the woods, the neighbor down the street, the corn in the garden. To go off into the world. To take a few books off the shelf of the world. To boldly go where no Macintosh has gone before.

There's already a project to create a public domain version of UNIX. UNIX? Do we need a public domain version of UNIX? This one, trust me, will be lots more fun.

So, today, let's begin, officially, Macbot.



GARY HOVLAND

The Macintosh is an extraordinary thing. But it doesn't have a transducer to look at fish.

To be even more official, let's say that:

"Macbot is a cooperative effort by Macintosh enthusiasts to design hardware and software to allow the Apple Macintosh computer to be a mobile, sensor-equipped robot capable of programmable movement, data collection and a degree of independent decision-making.

All hardware and software designs for Macbot shall be freely placed in the public domain by their creators."

That oughta do it.

We'll design it, make it, then make it a kit so everybody can make a Macbot.

So what will we need? First, a language. A Pascal (okay: BASIC) interpreter with extensions for movement and sensors would be nice. Maybe this: a few new "libraries" for *Microsoft Basic* dealing with robotic control.

Talking is easy; we'll use *MacInTalk*.

Then there's servo design...probably need to ditch the internal drive, because drives take too much power — or maybe not: you could always plug the drive in to program the Macbot. A new analog board, maybe, to allow straight DC input from a battery...a charge-coupled video camera would be great....

Well, I'm not the person to do any of that. What I know about robots could fit into a few paragraphs — and just did.

Who to head up the project? My first thought is Doug Sharp. Doug, along with Michael Johnson, wrote *ChipWits* — the game where you "teach" on-screen robots. This time, Doug could help do *ChipWits* for real! Or maybe Chris Crawford. He's smart, and I'd guess he'd be the perfect "diplomat" to arbitrate between design conflicts, goal conflicts and people conflicts.

We'll need a few other geniuses. A radio wizard to provide a link between Macbot and (of course) another Macintosh. Real-time video from Macbot would be nice, too. Janek Kaliczak of MicroGraphic Images could do hardware. Steve Brecher — the ultimate low-level programmer — could do low-level programming. Communications ...wonder if Scott Watson, Jean Hess or Dennis Brothers is doing anything this week?

The world is a maze, so maybe Robert Woodhead (*Wizardry*) and Richard Garriot (of *Ultima* fame) could help out. Infocom's Steve Meretzky could give Macbot a sense of humor.

Isaac Asimov could write the documentation.

My editor, Steve Bobker, could make sure the project was done on time.

Me? I'd get an easy two columns a year out of it. And, eventually, a Macbot!

Put it like this: if only 1/1000th of all the people writing public domain Macintosh utilities helped out, we'd be done by Easter!

If you're interested, write me. The address is 4808 France Avenue South, Edina, MN 55410.

Mention your area of expertise. If you don't have one, lie and be prepared to learn fast. I'll catalog names and talents, then pass the data base along to whomever I can sweet-talk into overseeing the project. I'm serious about this. I want one, don't you?

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Apple Computer MacWrite	99.00
Living Videotext More	159.00
Think Tank 512	99.00
Microsoft Microsoft Word 3.0	239.00
OWL International Guide	95.00
Symmetry Acta	39.00
Target Software Voila!	53.00
T/Maker Company WriteNow	105.00

Spelling Checkers

A.L.P. Systems MacProof V2.0	99.00
Batteries Included Thunder! *(Interactive Spelling Checker)*	28.00
Creighton Development MacSpell+ *(Requires 512K)*	55.00
EnterSet, Inc MacGas *(with Glossary & Thesaurus)*	55.00
Greene, Johnson Inc. Spellswell *(60,000 word Dictionary!)*	52.00
Lundeen & Associates WorksPlus Spell	32.00
Target Software MacLightning 2.0 w/Merriam Webster Dictionary	53.00
Additional Thesaurus Library	29.00
Medical Dictionary or Legal Dictionary	53.00

Desktop Publishing

Boston Software Publishers The MacPublisher II	139.00
Mac-Hy-Phen	69.00
MacIndexer	62.00
Manhattan Graphics Ready, Set, Go!3	169.00
Ready, Set, Go! Desk Design	37.00
Orange Micro, Inc. Ragtime *(Integrated Page Processing)*	239.00
Solutions, Inc. Glue *("Print to Disk" Capability)*	35.00

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BPI BPI Entry Series-General Accounting	129.00
Chang Labs *New Enhanced Version III Modules!* Rags to Riches GL, AR, or AP	125.00
Rags to Riches Three Pack-*(GL/AR/AP)*	299.00
Inventory Control	245.00
Professional Billing	245.00
Professional Three Pack-GL/Professional Billing/Payables	349.00
Continental/Arrays The Home Accountant	62.00
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Back To Basics Three Pack *(GL/AR/AP)*	129.00
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BrainPower StatView 512 Plus	179.00
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Statware, Inc. Stat80 *(Professional)*	279.00
Systat Systat *(Version 3.0)*	459.00

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Casady Company Fluent Fonts *(Two-Disk Set)*	29.00
Fluent Laser Fonts *Choice of: Bodoni, SanSerif, Ritz & Right Bank, Monterey, Caligraphy & Regency, or Prelude*	49.00
Dubl-Click Software World Class Fonts! Vol. 1 or Vol. 2	29.00
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Innovative Data Design Paste-Ease *(Volumes I & II)*	35.00
Miles Computing Mac The Knife Volume III or Volume IV	27.00
Mindscape ComicWorks	49.00
GraphicWorks	49.00
Silicon Beach Software SuperPaint	55.00
Silicon Press	42.00
Springboard Certificate Maker	36.00
Symmetry PictureBase	45.00
T/Maker Click Art Letters or Personal Graphics	29.00
Click Art Publications or Effects	29.00
Click Art Letters II or Click Art Holidays	29.00
Click Art Business Image	29.00

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Apple Computer MacDraw	159.00
BrainPower DesignScope	129.00
Challenger Software Mac 3D *(Enhanced Version 2.0)*	129.00
Cricket Software Cricket Draw	179.00
Dreams Of The Phoenix Phoenix 3D Level One	27.00
Enabling Technologies Easy 3D	69.00
Professional 3D	199.00
Innovative Data Design MacDraft *(Updated Version 1.2)*	159.00
MicroSpot MacPlot	119.00
MacPlot Professional	234.00

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Addison Wesley Puppy Love	14.00
Baudeville Ted Bear Discovers...Rainy Day Games	20.00
Guitar Wizard	20.00
Broderbund Sensei Geometry	65.00
Davidson & Associates Speed Reader II	39.00
Math Blaster or Word Attack!	28.00
Electronic Arts Pinball Construction Set	27.00
Deluxe Music Construction Set V2.0	64.00
First Byte Kid Talk, Speller Bee, or Math Talk	42.00
First Shapes	32.00
Great Wave Software KidsTime	29.00
Hayden MusicWorks	32.00
Score Improvement System for the SAT	59.00
Score Improvement-Achievement Tests	59.00
Kette Group Studio Session	69.00
Micro: Maps MacAtlas U.S.A. or MacAtlas World	49.00
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Learning Multiplan & Chart	39.00
Mindscape Perfect Score SAT w/The Perfect College	47.00
Rubicon Publishing Dinner at Eight	35.00
Silver Palate Collection	29.00
Dinner at Eight-Silver Palate Bundle	59.00
Simon & Schuster Typing Tutor III	35.00
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Software Concepts Concepts Computerized Atlas	39.00
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Springboard Early Games for Young Children	29.00
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Activision Shanghai or Hacker	27.00
Hacker II: The Doomsday Papers	32.00
Championship Star League Baseball	22.00
Alter Ego *(Male or Female Version)*	36.00
Tass Times In Tonetown	29.00
Artworx Bridge 4.0	21.00
Avalon Hill Mac Pro Football	32.00
Broderbund Ancient Art of War	27.00
Bullseye Software	
Fokker TriPlane Flight Simulator	35.00
Ferrari Grand Prix	35.00
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ChessMaster 2000	31.00
Patton vs Rommel or One-On-One	27.00
SkyFox, Archon, or Scrabble	27.00
EPYX Winter Games or Rogue	24.00
Temple of Apshai Trilogy	24.00
Hayden Software Sargon III	29.00
Infinity Software, LTD	
Grand Slam Tennis	28.00
Infocom	
Leather Goddesses of Phobos, Ballyhoo, Cutthroats, Hitchhiker's Guide, Moon Mist, Planetfall, Seastalker, Trinity, Wishbringer, Enchantor, Zork I, or Witness *(each)*	24.00
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Balance of Power	30.00
Deja Vu: A Nightmare Comes True	33.00
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James Bond 007: Goldfinger	24.00
King Of Chicago	32.00
Racter	27.00
Sinbad, S.D.I., or Defender of The Crown	32.00
The Uninvited	30.00
Origin Systems	
Exodus: Ultima III	38.00
PBI Software	
Strategic Conquest *Plus*	39.00
Practical Computer Applications	
MacGolf *(Version 2.0)*	36.00
Psion	
Psion Chess *(3D & Multi-Lingual)*	31.00
Q Ware, Inc. OrbQuest	35.00
Sierra On-Line Black Cauldron	25.00
King's Quest I, II, or III *(each)*	32.00
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Enchanted Scepters	21.00
Dark Castle	28.00
World Builder	42.00
Simon & Schuster	
Star Trek *(The Kobayashi Adventure)*	24.00
Sir-Tech Mac Wizardry	36.00
Spectrum Holobyte GATO	26.00
Orbiter	27.00
Sublogic	
JET	35.00

Disk Drives/Hard Disks/Upgrades

AST Research	
AST-2000	1795.00
20 MB External Hard Disk with 20-MB Cartridge-Tape Backup for the Macintosh Plus.	
AST-4000	4735.00
74 MB External Hard Disk with 60-MB Cartridge-Tape Backup for the Macintosh Plus.	
Dove Computer Corporation	
MacSnap Model 524 *(512K to 1MB Upgrade)*	139.00
MacSnap Model 548 *(512K to 2MB Upgrade)*	389.00
MacSnap Plus 2 *(MacPlus to 2MB Upgrade)*	259.00
MacSnap Plus 2H *(MacPlus to 2MB Upgrade w/1MB Chips)*	799.00
MacSnap Plus 4H *(MacPlus to 4MB Upgrade w/1MB Chips)*	1599.00
Ehman Engineering	
800K Disk Drive	219.00
20HD *(20MB SCSI Hard Drive)*	Call
Iomega	
Single Cartridge Drives	
Bernoulli Box 10MB w/SCSI	1059.00
Bernoulli Box 20MB w/SCSI	1199.00
Dual Cartridge Drives	
Bernoulli Box 2-10MB w/SCSI	1629.00
Bernoulli Box 2-20MB w/SCSI	1899.00
10MB Cartridges *(3 Pack)*	159.00
20MB Cartridges *(3 Pack)*	209.00
Head Cleaning Kit	69.00
LoDOWN	
LoDown 20/20 Combo *(20 MB Hard Disk w/20MB Tape)*	1439.00
LoDown-T20 *(20 Megabyte Tape Drive)*	789.00
LoDown-20 *(20 Megabyte Hard Disk)*	889.00
MacMemory, Inc. *All MacMemory products carry a full two year warranty!*	
MaxPlus *(2MB Upgrade w/MaxRam/MaxPrint/MaxChill)*	265.00
MaxPlus Enhanced *(2.5MB w/MaxRam/MaxPrint/MaxChill)*	489.00
MaxSave *(Internal Recoverable Ram Disk For the MacPlus)*	79.00
MaxPack *(MaxPlus and MaxSave Bundle)*	339.00
MaxPort *("SCSI" Port for your Mac 512K)*	139.00
MDIdeas, Inc.	
HD-20 *(20MB Hard Disk w/SCSI)*	859.00
HD-30 *(30MB Hard Disk w/SCSI)*	1199.00
TDBK-20+ *(22MB Tape Backup)*	859.00
Mirror Technologies	
Magnum 800K External Drive	229.00
MagNet 20X *(External 20MB Hard Drive w/Cable)*	779.00
MagNet 30X *(External 30MB Hard Drive w/Cable)*	949.00
MagNet 30X *(External 30MB w/MacServe & Cable)*	995.00
MagNet 40/40 *(40MB w/40MB Tape, MacServe Included)*	2695.00
MagNet 85X *(74MB w/40MB Tape, MacServe & Cable)*	4495.00
Magnum Tape 20 *(20MB Backup)*	929.00
FastPort *("SCSI" Port for your Mac 512K)*	139.00
Personal Computer Peripherals	
MacBottom HD-21 *(20MB Hard Disk for MacPlus SCSI)*	869.00
PKI MeD 800K External Drive	189.00
ProAPP	
World's Fastest High-Capacity MacPlus SCSI Hard Disk System:	
ProAPP 40S Hard Disk System *(Sub-30msec. Voice Coil Technology)*	Call
ProAPP 20MB Hard Disk System *(Mac 128K,512K,MacPlus SCSI)*	Call
Western Automation Labs	
Dasch External RAMdisk *(2048KB)*	459.00

Modems

Hayes Microcomputing Interbridge	549.00
Smartmodem 1200	379.00
Smartmodem 1200 Mac w/Smartcom II & Cable	429.00
Smartmodem 2400	579.00
Transet 1000-128K	269.00
Transet 1000-512K	359.00
Transet 1000 Mac Accessory Kit	31.00
Prometheus	
Promodem 1200 *(Hayes Compatible)*	279.00
Mac Pack w/Procom M and Cable *(Specify Mac or MacPlus)*	42.00
U.S. Robotics	
Courier 1200 *(Hayes Compatible)*	199.00
Courier 2400 *(Hayes Compatible)*	419.00

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Single Sided 3½" Diskettes	
BASF 3½" SS/DD Disks *(box of 5)*	9.00
Bulk *(Sony)* 3½" SS/DD Disks *(10)*	15.00
Sony 3½" SS/DD Disks *(box of 10)*	16.00
Centech 3½" SS/DD Color Disks *(box of 10)*	18.00
Fuji 3½" SS/DD Disks *(box of 10)*	16.00
Maxell 3½" SS/DD Disks *(box of 10)*	16.00
Verbatim 3½" SS/DD Disks *(box of 10)*	17.00
3M 3½" SS/DD Disks *(box of 10)*	19.00
C.Itoh Color Disks SS/DD *(box of 10)*	21.00

Double Sided 3½" Diskettes	
BASF 3½" DS/DD Disks *(box of 5)*	14.00
Bulk *(Sony)* 3½" DS/DD *(10)*	21.00
Centech 3½" DS/DD Color Disks *(box of 10)*	24.00
Sony 3½" DS/DD Disks *(box of 10)*	24.00
Fuji 3½" DS/DD Disks *(box of 10)*	24.00
Maxell 3½" DS/DD Disks *(box of 10)*	24.00
Verbatim 3½" DS/DD Disks *(box of 10)*	25.00
3M 3½" DS/DD Disks *(box of 10)*	27.00
C.Itoh Color Disks DS/DD *(box of 10)*	29.00

Digitizers

Kette Group	
MacNifty Audio Digitizer w/SoundCap	99.00
Koala Technologies Corp.	
KAT Graphics Tablet	139.00
MacVision *(Digitizer)*	175.00
Magnum	
Natural Sound Cable & Editor	89.00
Sound Effects	26.00
New Image Technology Magic Digitizer	249.00
Summagraphics	
MacTablet 6x9 size	289.00
MacTablet 12x12 size	379.00
ThunderWare	
Thunderscan V3.2	175.00
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Cambridge Automation Numeric Turbo	109.00
Mac Turbo Touch	89.00
Curtis Manufacturing	
Diamond-Surge Suppressor-SP1	29.00
Emerald-Surge Suppressor-SP2	36.00
Ruby-Surge Suppressor-SPF-2	55.00
Sapphire-Surge Suppressor-SPF-1	47.00
Environmental Software Company	
MacAttire: Available in Navy-Blue, Burgundy, or Silver-Gray.	
External Drive or Keypad Cover	7.00
ImageWriter II Cover	11.00
Wide ImageWriter Cover	13.00
Mac & KeyBoard Cover	15.00
MacPlus & Keyboard Cover	15.00
MacPlus, HD-20, & Keyboard Cover	18.00
LaserWriter Cover	17.00
Ergotron	
MacTilt *(with External Drive Bracket)*	75.00
MacBuffer 512K	369.00
MacBuffer 1024K	569.00
Hayes CH Mach IV Joystick	59.00
Innovative Concepts	
Flip 'n' File/Micro	9.00
Flip 'n' File II/Micro	18.00
Innovative Technology	
The Pocket Pack *(holds 6 disks)*	9.00
The Disk Directory *(holds 32 disks)*	18.00
The Easel *(holds 20 disks)*	12.00
The Library *(Carousel-Holds 80 Disks)*	29.00
I/O Design	
MacPlus Carrying Case	69.00
ImageWriter II Carrying Case	49.00
ImageWriter Wide Carrying Case	49.00
Kalmar Designs	
Teakwood Roll-Top Disk Cases:	
Micro Cabinet *(holds 45 disks)*	15.00
Double Micro Cabinet *(holds 60 disks)*	22.00
Kensington	
System Saver Mac	65.00
Turbo Mouse	89.00
A/B Box *(Specify Mac or MacPlus)*	65.00
Disk Case *(holds 36 Mac disks)*	19.00
Disk Drive Cleaning Kit	20.00
External Disk Drive Cover	8.00
ImageWriter or ImageWriter II Cover	9.00
Macintosh (Plus) Dust Cover	9.00
Mouse Cleaning Kit w/Pocket	17.00
Mouse Pocket	8.00
Mouseway *(Mousepad)*	8.00
Polarizing Filter	34.00
Starter Pack *(includes Tilt/Swivel)*	59.00
Surge Protector	35.00
Tilt/Swivel	22.00
Control Center	65.00
Printer Stand	18.00
Copy Stand	22.00
Kette Group	
MacNifty Stereo Music System MNS-200	75.00
MacNifty Stereo Music System MNS-300 *(Dolby, Bass, Treble)*	99.00
Kraft QuickStick III	49.00
MacMemory, Inc.	
MaxChill *(Internal Piezo-Electric Fan)*	37.00
Moustrak MousePad 7"x9" Size	8.00
MousePad 9"x11" Size	9.00
MPH Computer Products	
MAC-B-COOL	99.00
Ribbons Unlimited	
Available in Black, Blue, Brown, Green, Orange, Purple, Red, Yellow, Silver & Gold	
ImageWriter Ribbon-Black	4.50
ImageWriter Ribbon-Color	5.00
ImageWriter Rainbow Pack *(6 Colors)*	25.00
ImageWriter II-Four Color Ribbon	12.00
Smith & Bellows	
Hand Crafted Mahogany Disk Case: Holds up to 90 Diskettes	27.00
Hand Crafted Basswood Disk Case: Holds up to 90 Diskettes *(Natural or Stain)*	19.00
Systems Control	
MacGard Surge Suppressor	55.00
X-10 (USA) Inc.	
X-10 Powerhouse Computer Interface	65.00
X-10 Wall Switch Module	15.00
X-10 Lamp Module	15.00
X-10 Appliance Module *(Specify 2 or 3 Pin)*	15.00

Positively A Plus!

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AST Research Announces The AST TurboScan.™ It's the perfect addition to your Macintosh™ desktop publishing system.

AST TurboScan optically scans and digitizes photographs, artwork, handwriting, text...anything that can be rendered on paper. It allows you to incorporate such images into newsletters, reports, letters, artwork...any type of document.

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AST TurboScan's 300 dots-per-inch (dpi) resolution matches your LaserWriter's® dpi for optimal visual clarity. So you can scan and print at near half-tone quality. And we've included AST TurboScan Utility™ software to let you enlarge, reduce and merge scanned images with text and other graphics.

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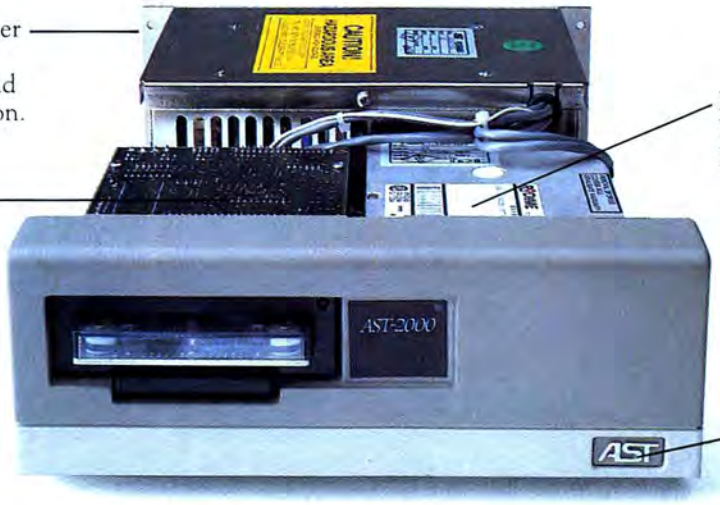
The Evolution Of Data Storage.

SCSI. Small Computer System Interface For Fast Data Transfer And Plug 'n Play Installation.

Tape "Disk." Fast 20 MB Tape Drive Can Be Used For Hard Disk Backup Or Direct Read And Write.

256K Cache. AST's Exclusive Memory Cache Provides A RAM-Fast Buffer To Tape.



Hard Disk. 20 Megabytes (MB) Of Fast-Access Data Storage.

AST Quality. Over 160,000,000 Read And Write Tests Performed On Each Unit.

In The Beginning... there were floppy disk drives. They were slow. Then came Winchester hard disks that plugged into a Macintosh™ serial or floppy port. These offered increased storage but were still slow.

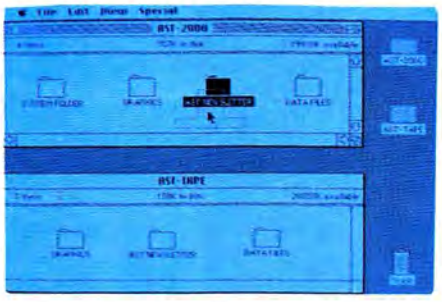
And Then One Day... someone invented SCSI (Small Computer System Interface), a much faster interface than floppy or serial ports. And suddenly, hard disks were more than just lots of storage. They were fast.

Hard disks became very popular. But a new problem arose. Disk crashes. Though infrequent, crashes were very traumatic.

Thus It Came To Be... tape backup was developed. And it was good. Data stored on a hard disk could now be "backed up" onto a tape cartridge and stored. In the eventuality of a crash, data could then be restored to the hard disk. The trauma was over.

Tape backup was slow, however, and the engineers at AST Research could not rest. They labored to create a better hard disk/tape backup system. And, thus, after many months of toil they developed a 256K Cache and a Tape Motion Optimizer Algorithm. Innovations so unique, patents were applied for.*

An Unprecedented Advance... the Cache was a RAM buffer into which files could be moved for back-up to tape. The computer would then be freed up. Work could continue while backup was occurring! And, yes, it was even user friendly.



And, if the hard disk should need maintenance, the tape could be used like a floppy diskette – written to directly via the fast 256K RAM Cache.

The system was complete! The AST-2000™ was born.

AST-2000: The Pinnacle of Data Storage Evolution. The AST-2000 combines a 20 MB Winchester hard disk, 20 MB Tape, 256K Cache and SCSI connector. It is the ultimate data storage system for your Apple® Macintosh Plus.

Contact your nearest AST-authorized Apple Products Dealer today! Or send the coupon to AST Research, Inc., 2121 Alton Avenue, Irvine, CA 92714-4992. Phone: **(714) 553-0340.** BBS: (714) 660-9175 FAX: (714) 660-8063.

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Send to: AST Research, Inc., 2121 Alton Avenue, Irvine, CA 92714-4992, Attn: Apple Enhancement Products Group

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Trying to stay alive makes these programs killers.

Examine	Open	Close	Speak
Operate	Go	Hit	Consume

Go where computer adventures have never gone before. But you've got to be careful.

Deja Vu: A Nightmare Comes True™ and Mindscape's new *Uninvited*™ put you in the kind of tight spots that make droplets of sweat appear on your mouse.

MacUser Magazine and the Software Publishers Association both named *Deja Vu: A Nightmare Comes True* the best entertainment software program for 1985. And they had good reason.

Point and shoot. Just click OPERATE, your weapon, and your target.

With close to a megabyte of involving graphics to manipulate with the ease of a mouse, you're free to do your detective work. Not that your problems are simple. You've awakened in a drug induced stupor with the police and a gruesome gang of hoods on your tail. To make your plight worse, you don't remember who you are.

So you've got to be on your toes. Grab your mouse. Aim your .38. And deter a threat without wasting time.

Examine	Open	Close	Speak
Operate	Go	Hit	Consume

Examine the newest Mindscape thriller. It's not a sequel. But it is sensational.

Uninvited lets you take a terrifying journey of fear through the eerie confines of a dark, mysterious mansion. *Uninvited* really goes bump in the night with full digitized sound.

Animation puts the locals, a collection of demons and specters, in an exciting new light as they step out of the shadows. It won't take long for you to discover that they prefer not to have house guests.

You've got quite a mystery to solve. And your hide to save. So don't wait for a formal invitation.

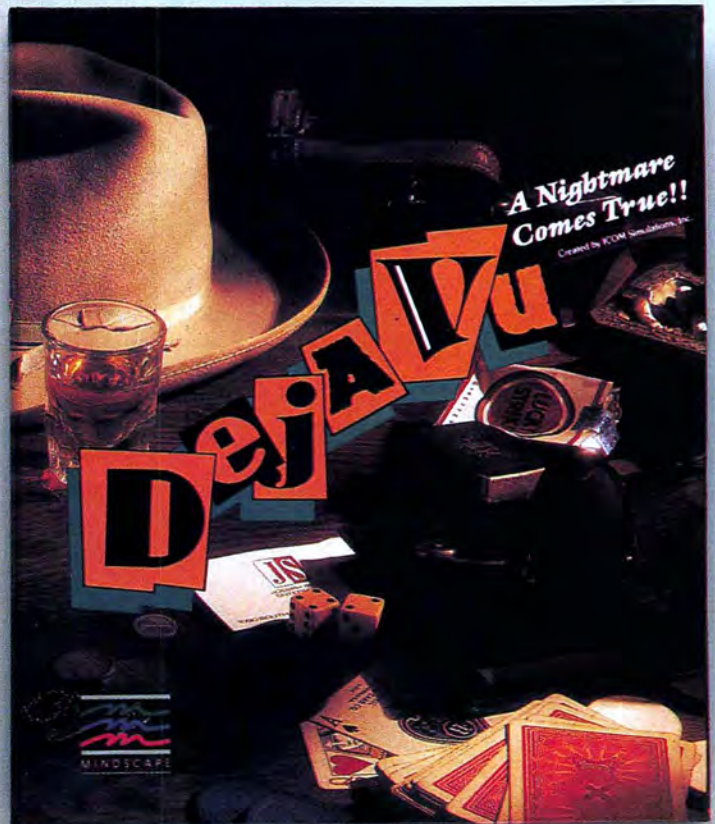
Examine	Open	Close	Speak
Operate	Go	Hit	Consume

Consume the kind of excitement you would do almost anything to avoid in the real world. Experience what *MacUser* called"...a complete breakthrough in gaming."

Deja Vu: A Nightmare Comes True and *Uninvited* are available now to maximize your Macintosh™ for spell-binding action. Enjoy them both.

And discover how much fun murder and mystery can be.

Mindscape
Software that challenges the mind.



Uninvited.

MacUser EDITOR'S CHOICE AWARD 1·9·8·6

Developed by ICOM Simulations, Inc.

MINDSCAPE

Visit your retailer or call 1-800-443-7982 (in Illinois 1-800-654-3767) for VISA or MasterCard orders. To purchase by mail, send VISA or MasterCard number with expiration date, check or money order to Mindscape, P.O. Box 1167, Northbrook, IL 60065. Add $3.00 for shipping and handling. Allow 3-5 weeks for delivery. *Uninvited* and *Deja Vu: A Nightmare Comes True* are each $49.95.

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QUICK CLICKS

THE PAWN ★★★½

List Price: $44.95. Requires Mac Plus. Firebird Licensees, Inc., PO Box 49, Ramsey, NJ 07446. (201) 444-5700. Copy protected.

The Pawn was written in England for Ataris, Sinclairs and Amigas. So you expect both the concept and the language used in this import to be different. Magnetic Scrolls (the creators) went to a lot of trouble to design their own, very different interface.

The on-screen interface is just the beginning. The manuals don't provide any significant help in working out some of the more unusual aspects of the interface. For example, you're entirely on your own when you attempt to use (or even see) the "scroll-down" menus. You may never quite master them (you must adroitly click up them while grabbing), but fortunately, any menu command can be typed in.

Although *The Pawn* is a graphic game, many players are going to ask "Where are the graphics?" The experimentally inclined among you might locate them, hidden not in the scrolls, but in the dowels. Some players are going to play the entire game without ever seeing the graphics.

Figuring out what to do about matters like these will get you into the spirit of the game. You don't even have a task or goal when you begin. You must determine these

on your own as you proceed. The generally excellent parser, which will accept long strings of commands and more alternative expressions than most parsers, is usually on your side. Sometimes, however, the vocabulary is either obscure or charmingly British. "You'll need to get kitted out," is a particular favorite of mine. And some solutions are too difficult: "Tie the rake to the hoe with the shirt. Then lever the boulder with the rake and the hoe." Sure.

This interface was not designed for the Mac and possibly some of the effects work better on the machines it was designed for. In particular, the graphics didn't transfer well. They were originally in color and should have been improved for the Mac.

There are also some inconsistencies. When you try to quit, for example, you are then offered several alternatives, including the option to quit. When you then type "Q" as requested, the menus suddenly become "hot." If you then type a carriage return after the "Q", the whole sequence is lost and must be started all over. If you type "Q" without a carriage return you still must type "Y" to exit the game. The correct sequence, then, is "Quit (carriage return)," "QY." At that point you exit cleanly, if slightly frazzled, to the desktop.

Some of *The Pawn*'s unique features do work beautifully. Once located, the graphics are superior to the hackeyed alternative of having graphics and text simultaneously share the screen space.

The Pawn's manual consists of a long and amusing fantasy tale. It is necessary to read it in order to complete the game. At the end of the manual are several pages listing codes you can type in order to obtain on-screen clues. The codes are difficult to type correctly and the clues are sometimes insufficiently helpful. And as a form of piracy prevention, you must utilize the manual every time you wish to restore a saved game.

This is a difficult game chock-full of challenging problems. It is possible to achieve a maximum of 350 points during play, although to attain that score you must sacrifice some goals. There really are some genuine choices to be made in *The Pawn*, as should be the case with all interactive fiction.— *Linda Joan Kaplan*

VOILA! ★★★★

List Price: $99.95. Published by Target Software, 14206 SW 136th Street, Miami, FL 33186. 1-800-622-5483; in Fla. (305) 252-0892. Requires 512K+ & at least 800K disk storage. Mac XL not supported. Takes up 90K on disk, 40K of memory, 100K extra per application in Switcher. *Not copy protected.*

Target Software, of *MacLightning* fame, has released yet another power desk accessory, an outliner called Voila! Yes, it's a desk accessory, but this is a full-featured outliner — not a stripped-down model.

Target learned from the mistakes Living Videotext made with *ThinkTank*, and has developed an excellent solution to the problem of moving headlines and editing them with standard Mac editing techniques. When the text tool is active — which is the default mode — different regions on the

screen are sensitive to different functions. Headlines themselves can be edited like normal text; the symbols to the left of the headlines can be used to open and close "expanders" (*Voila!*'s name for the document windows associated with headlines); and the space to the left of the symbols can be used to move headlines or to expand and collapse subheads.

No extra keystrokes are needed to accomplish any of these functions. However, the headline moving function needs some more work. Where you *think* you are putting a headline rarely — no, never — turns out to be where you are actually putting it. Anyone used to *ThinkTank* or *MORE* will know this can be done better. Target also chose not to implement Tab and Shift — Tab for moving headlines right and left; they used COMMAND-RIGHT ARROW and COMMAND-LEFT ARROW instead. This is a poor decision, especially since they don't use the Tab key for anything else.

Unlike other outliners, *Voila!* will allow you to set the font, point size and type style for individual headlines. This is a very nice touch. Unfortunately, Target missed the mark on font/size/style selection within expander windows. It works just like a text block in *MacDraw:* change anything anywhere in the block and you change everything.

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Voila! can read *Word* and *MacWrite* files (saved as "text only") and convert them into outlines; it can write an outline in text form as well. It can also read *ThinkTank* and *MORE* documents and its documents can be read by these other outliners.

A pointer tool allows you to select any portion of an outline you like for cutting/copying to the Clipboard. You are not restricted to a single headline and its associated subheads.

Miscellaneous shortcomings: Only one outline and one expander can be open at a time (not an unreasonable limitation for a desk accessory, but still a limitation). Expanders have rulers, but they default to a 4 inch width and no tabbing is available. There is no menu command to bring the *Voila!* window to the front, which makes it necessary to resize windows to work effectively with *Voila!* and another application simultaneously.

The documentation is adequate; most functions are explained well. However, the explanation of the pointer tool, one of the program's most powerful features, was practically opaque. It read like it had been poorly translated from another language.

In sum, if you are looking for the power of *MORE* in a desk accessory, you will be disappointed — but then that is not an entirely reasonable quest. But *Voila!* easily rivals *ThinkTank* and even goes a little further. Besides, it's a desk accessory. An excellent value, even at list price. — *Henry Bortman*

MACSAFE ★★★★

List price $69.95. Published by Kent Marsh Limited, Inc., 1200 Post Oak Boulevard, Suite 210, Houston, Texas 77056. (713) 623-8618. HFS compatible, copy protected.

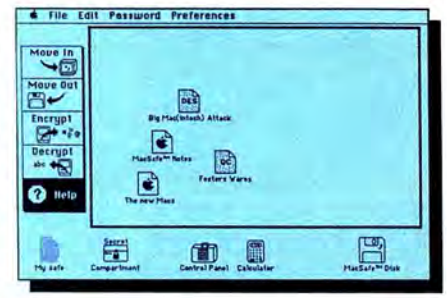
If the on/off switch of your Macintosh is not enough protection for keeping those prying eyes away from your important data files, then *MacSafe* might be the perfect solution to your problems. Basically, *MacSafe* is an application that allows you to take sensitive files, and place them into a "locked safe" on your drive. From there, only people with the password, may remove the items from the safe.

MacSafe is unique in that it is one of the only standalone products on the market that lets you protect your files a number of times over. Besides being able to place your important files in the safe, you can place your very sensitive files in a "secret compartment" that requires yet another password for retrieval. Another feature of *MacSafe* is the ability to encrypt the individual files (in the safe) with yet another password. With your files encrypted and protected with three passwords, you can rest assured that these files are in safe territory.

The use of *MacSafe* is very intuitive. Upon entering the program, you can create a new safe and assign that safe a password. After creating your safe (and entering your password, if you decide to use one), you see the special *MacSafe* desktop. The black rectangle, encompassing most of the screen, shows what's been stored in either the safe or the secret compartment. The area on the bottom, known as the Set Aside Region, is where icons symbolizing the storage areas are shown. Desk accessories can also be moved to this region (and they will continue running).

After choosing the files to go into the safe, you can then encrypt them (giving each an individual code word) with one of two different types of encryption methods. QuickCrypt, the default encryption type, is not as powerful as the other, the American National Standard for Data Encryption (DES), but is much faster. Both encryption types are very rigorous; however, the DES type is known to be very close to impossible to break. I've found that QuickCrypt does the job more than thoroughly enough. Encryption only works on data files (documents), not applications.

A feature you won't find in the manual is the ability to solely encrypt a file. The procedure for doing this is slightly awkward.



You must place an item in the safe, encrypt it and the move the encrypted file out. The procedure for decrypting the file is just as awkward.

MacSafe also allows you to place a document in the Secret Compartment without knowing its password. For example, an assistant can place a sensitive document inside their boss' secret compartment, without being able to see what is already there. Another useful feature is the on-line help facility. This is an excellent, comprehensive complement to a short, if well written manual.

MacSafe is copy protected, but the application allows you to "authorize" other protected copies of the program so that it can be used on a hard disk. — *DS*

EXECUTIVE OFFICE ★★★½

List Price: $249.99. Published by DataPak Software, Inc., 14011 Ventura Boulevard, #507, Sherman Oaks, CA 91423, (818) 905-6419. Available on either a 400K or 800K disk. Copy protected. Version tested: 4.0.

For many situations, *Executive Office* is a useful tool — the kind of application to leave running continuously. It integrates many typical office functions. Among its capabilities are file management, word processing, spreadsheet, graphics and form design and mail merging. Missing are an appointment calendar, business graphics and telecommunications. The *Liberty Spell Checker* is available as an option.

Executive Office comes on either a 400K or an 800K startup disk. Avoid the 400K version because the program gobbles so much room on the disk that you can't put extra fonts and desk accessories on it.

The manual contains most of the information you'll need, but it's written in a condescending Mister Rogers' Office—style. Bad grammar, excessive use of passive voice and tangled sentences make it difficult to understand. To be fair, the basic information is there, and it's logically organized.

While no integrated package can include every type of application, *Executive Office* is an especially good collection. It has many genuine strengths. As a whole, it's stronger than its individual parts.

The data base manager is the heart of the program, and it does some amazing things. Every folder has a large index form to help you enter and recover information. In fact, you have a choice of four types of index forms: Client or Personnel, Invoice, Dateline and Product or Inventory. Field

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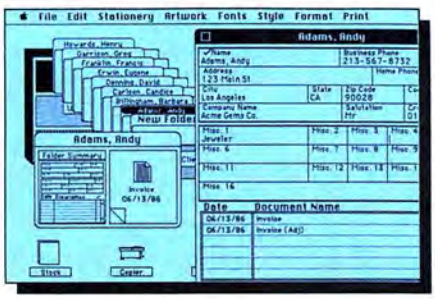
names on the forms can be renamed, so you can adapt the forms to your business.

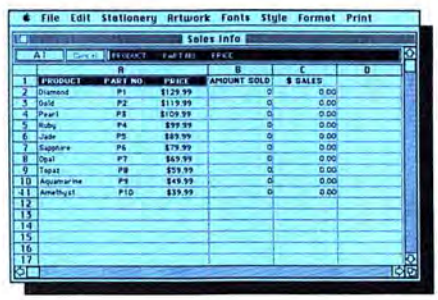
The File Clerk's sorting and searching functions locate the information you need with ease, and the folder index displays an immense amount of data at a glance. The name and address portion at the beginning serves as your address book. The File Clerk finds the person you want, and shows the folder index for that person, with a complete list of documents in the folder. When you do a mail merge, you can change the order to first name/last name and use the salutation entered in the index form.

In the forms design section, you can incorporate clip art transferred through the Clipboard, or draw it yourself. After designing your letterheads, memo forms, invoices and other types of forms, you store them in the stockroom to use whenever the need arises. An automatic date stamp is available, although you can't see the actual entry until you close and re-open the document. You can retrieve data from the folder indexes too. The most useful feature of this section is the self-calculating form. For example, you can design an invoice that does its own extensions and totals — while you enter the order. Strangely, after you've designed a form and saved it, you must Quit the program and reboot to continue.

The word processor is generally similar to *MacWrite*. But it has one capability no other Mac word processor has: It can word-wrap between two Tab stops. When you're transferring text from a data base manager, this is a wonderful feature.

Executive Office can have several documents open at once on the desktop, such as a letter and a spreadsheet, plus an invoice. That way, you can write a letter to answer a customer complaint while looking at the relevant documents, or even paste them into the letter.





The spreadsheet is the most limited section, but that actually makes it more useful. It's a minispreadsheet, with only five columns and 72 rows, but it's exactly the right tool when you need to do an expense report or a quick budget projection. You don't have to quit and boot up a big application like *Multiplan* just to do a few simple calculations. With *Executive Office*, you simply take out a worksheet from the stock room, enter your data, and go back to your previous task. When you need the power of a big spreadsheet, *Executive Office* can import and export data as necessary.

All told, *Executive Office* is a flexible and useful office tool. It has exactly the right functions — connected in logical, obvious ways — to serve as a general workhorse. In its present stage of development, it has a few quirks and deadends that need fixing. For example, it should have a re-entry into the application after you've finished designing a form. DataPak should discontinue the 400K startup disk, or else pare away some functions to make it usable on a smaller Mac system. The key disk copy protection scheme is totally unacceptable for this kind of application. When you're running your business on *Executive Office*, you can't afford the inconvenience of having all your files inaccessible because the startup disk became unreadable. And, of course, the manual should address the user as a professional, not as an airhead. For an individual or a small business, *Executive Office* could be a lifesaver. — *Steve Birchall*

PUPPY LOVE ★★★★½

List Price: $19.95. Published by Addison-Wesley, Reading, MA 01867. (617) 944-3700. Does not run from a hard disk. Copy protected.

What could be better than a maintenance-free pet? How about one that taught you about some of the basic concepts of computer programming and artificial intelligence as you "teach" it? That's exactly what *Puppy Love* offers. This Tom Snyder—created program lets you "adopt" a poor homeless puppy of your very own. Using good amounts of patience and praise you teach your dog tricks.

Your puppy (name it whatever you want) is excellent raw material. If you're good enough and patient enough, you will be able to teach your dog to fly by standing on its forepaws and rapidly revolving its tail. (That loses something in the description. You really have to see it to believe it.) And when you do get your puppy to do what you want it to, don't forget to reward it with a bone or two. These dogs live solely for your praise.

Teaching your puppy basic tricks and then competing at the lowest and simplest levels of the dog show is simple, simple enough even for very young children to master, although they might need some spelling help. Even if the dog is never taken to the show (which it badly wants to go to, and it doesn't hesitate to remind you to take it) the game aspects will give a child many hours of pleasure.

The real learning comes from competing at the higher levels of the dog show. Simple tricks are no longer enough to garner ribbons and medals. You'll have to create routines for your puppy. These routines are prepared in the choreography section of the program. Routines can be as simple as a list of tricks or as complicated as a full blown program. They can take into account environmental conditions such as a light (on or off), a squirrel (watching or not watching), Norman (who sometimes peeks out), wind and the condition of the mailbox door. You combine these conditions with tricks with commands like And, Or, While, Wait, If, Until and If . . . Otherwise. There are also positioning commands so your dog can always be center stage, and you must be aware that puppies get tired after doing too many tricks in a row.

Since choreography is programming, there's a built-in debugger, so you can fix routines that have gone askew. Winning prizes at the higher levels requires excellent routines. If you compete and fail to win, the judges will advise you on proper performance so you have a better shot next time.

The very best puppies and trainers will finally win Golden Top Dog award. If you and your pup ever reach that coveted plateau, you'll not only have had a lot of fun, but you'll likely know a lot more about programming than when you started.—*Tara Talton*

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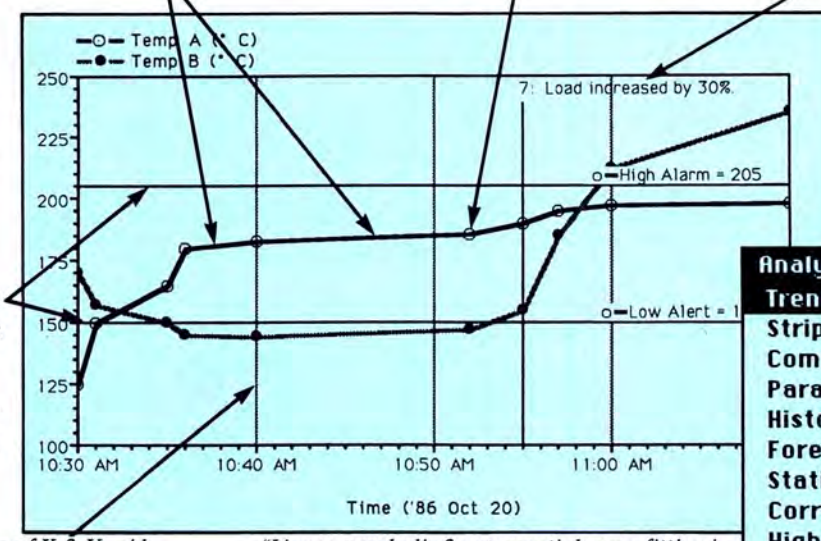

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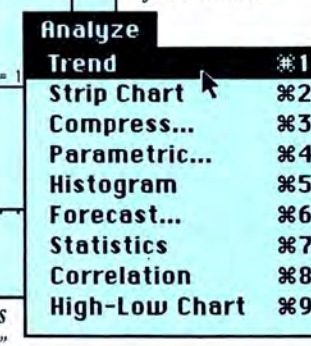

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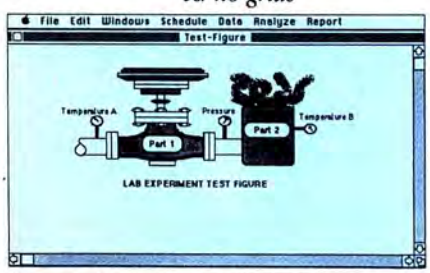

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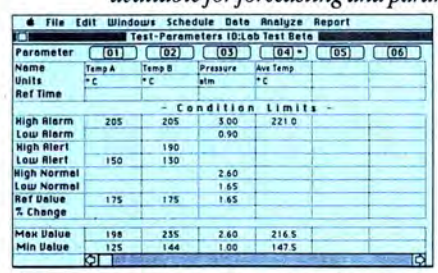

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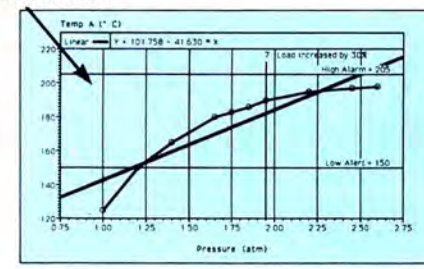

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DOCUMENT MODELER ★★★★½

List price: $299.95. Published by The Model Office Co., Inc., The Gooderham Flatiron Building, 49 Wellington St. E, Toronto, Ontario M5E 1C9, Canada. (800) 268-8181 or (416) 860-1033. Not copy protected.

Artificial intelligence is a much-talked about computer concept. In the microcomputer world, it's still more talk than action. The area of AI most suitable to micro applications is *expert systems*, the intelligent mating of knowledge and a query structure. And no Mac program has come further as an expert system than *Document Modeler*. This program can exhibit amazing abilities when correctly programmed.

The real work involved is creating the necessary document "blanks" or templates in the *Template Maker* program. Once the templates are created, they can be filled using the *Document Maker* program in by anyone, even people who neither understand the material particularly well, nor anything at all about programming. If the *Document Maker* is combined with an automation program such as *Tempo*, all the user need do is turn on the Mac, insert the disks and follow the directions that appear.

Templates are created from scripts. The scripts are simply text files written in *Template Maker*'s programming language. There is no editor provided, you'll need to use your own favorite (as long as it can save text-only files). Don't underestimate this language. It's both powerful and complex. In fact, you might be best off hiring an expert in the language to help create your initial templates.

The final templates will contain set (boilerplate) text, prompts (or questions for the person using the template to answer), reference material and graphics. The prompts or questions are the heart of the system. Virtually any type of question can be posed, and calculations can be triggered based on the answers. Extensive error checking is possible, so that numbers, in particular, can only be within specified ranges. The Reference feature (with its own window) is crucial also. Here, the template creator can supply as much ancillary material as desired. This material can be used to help answer the prompts, or even (when copied and pasted) as part of the answers.

Creating final documents is both simple and straightforward. A template is selected, previous answers (if desired) are selected, and the program begins putting the finished document into the display window. It stops wherever user input is required and waits for it. The only thing to remember is that no editing is possible in the display window. Thus your typed answers should be as accurate as possible. If errors are made, you can rerun the template (if it is short) or save the end result as a *MacWrite* document for further editing.

Overall, *Document Modeler* is a superb, high-performance program. The extensive documentation is both complete and necessary. While the program will greatly improve productivity in offices where it is used, it requires a substantial learning and set-up investment.—*SB*

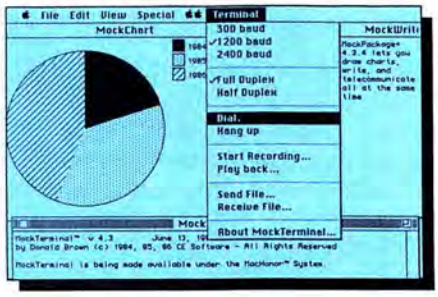
MOCKPACKAGE+ ★★★★½

Shareware and prelicense price: $35. Published by CE Software, 801 73rd Street, Des Moines, IA 50312. (515) 224-1995. HFS compatible. Not copy protected.

When the Macintosh was young, way back in early 1984, a programmer in Iowa decided that while desk accessories were a good idea, maybe everyone didn't want to use exactly the same set of them on every disk. So he wrote *Desk Accessory Mover (DAM)*, the first shareware programs for the Macintosh. He even included a few desk accessories which he had written with it.

The programmer was Donald Brown, and he and his company, CE Software, have become shareware legends along with Scott Watson and *Red Ryder*. Even after Apple's *Font/DA Mover* (it replaced *Font Mover*) was introduced, obviating the need for *DAM*, CE Software has remained committed to desk accessories.

MockPackage+ (current version at press time was 4.3.4 — versions prior to 4.2 do not support the Mac Plus) is a nifty collection of very handy desk accessories. It includes *MockTerminal*, a simple TTY terminal emulator that can operate full or half duplex at 300, 1200 or 2400 baud, and has full-scale terminal program features such as MacBinary XModem file transfer, text file capture and send, and a phone book for frequently dialed numbers.



Perhaps the most useful accessory in the package is *MockWrite*, a text editor that supports tabs, has a find feature, and allows text files to be inserted into the file being edited. *MockWrite* also prints, even to the LaserWriter. The big disadvantage of *MockWrite* is that it is limited to text files that are less than 28K in size. However, you can still print text files larger than that with *MockPrinter*, the final accessory in the package, which allows printing of text files to both the ImageWriter or LaserWriter with many options, such as page headers, varied spacing, adjustable margins and tab settings, and multiple copies.

Also in the package is *MockChart*, a simple little charting accessory that will draw line charts, column charts, overlapped column charts, pie charts or high/low/close charts of limited amounts of data (three columns and 100 rows, and numbers must be between —15,000 and 15,000) which can then be copied and pasted into other applications, such as *MacWrite*. *MockChart* won't do what *Excel* or *Cricket Graph* will, but for simple charts very quickly, it does the job.

The final part of the *MockPackage+* is not a desk accessory, but an application program called *MockPackage Utilities*, which will configure *MockTerminal* for its first use (important if the printer port is where the modem is), strip out the order forms from the desk accessories to make them smaller, and install *EZmenus*, the final part of the *MockPackage+*, if desired. *EZmenus* causes menus to drop down when the cursor is over them, eliminating the need to click and hold down the mouse button. When you slide down to the item you want, just click and it's done.

The major problem with the *MockPackage+* is that these desk accessories are so full-featured that it's hard not to compare them to applications, against which they come up a bit short, since the limited size of a desk accessory precludes a lot of bells and whistles. But compared to other desk accessories, it's easy to see that there is value for the $35 here, especially since CE Software sends a printed manual and the latest version on disk upon receipt of payment. — *Robert R. Wiggins*

GET IT WRITE

Laser Author, MindWrite, Microsoft Word 3.0, Word Handler and WriteNow: head-to-head comparisons and judgments.

BY MICHAEL D. WESLEY

TO THE WRITER THERE IS NOTHING more exciting, nor more terrifying, than a blank page. A blank page poses the ultimate challenge: Begin with nothing but your skills and create something magnificent. The terror that lurks so near takes the shape of a simple question: Am I up to the challenge? The fear cannot be put away, it must be faced head on and battered into submission.

Creation demands of the writer a tremendous amount of emotional, intellectual and physical energy. Although there is no way to make the mental struggle any less painful, there are tools available to simplify the mechanical process. For the wordsmith, there is no tool more valuable than a word processor. There is also nothing more personal. A word processor that inspires one writer to great heights may fling another into despair. The way a word processor feels is as important as what it can do.

BACKTRACKING

MacWrite, the original Mac word processor, did and does many things well. It is very easy to use, lets you place graphics and tables on the written page, and it gave most of us our first taste of the extraordinary ways in which Macintosh handles text. But *MacWrite* is missing a lot; for instance, an easy way to change formats from paragraph to paragraph. *MacWrite* forces you to insert rulers every time you want a section to look different from the block of text before it. That's a pain. *MacWrite* also provides minimal control over headers and footers, has no ability to create footnotes or indexes, can't hyphenate long words and won't let you work in a space wider than the screen.

Microsoft Word (versions 1.0 and 1.05) is different. It's the program with power, and has a sizeable following. *Word* 1.05 lets you do most of the things that *MacWrite* doesn't, and even has some special features of its own. Many rabid *Word* 1.05 users like its shortcuts that let them bypass the Clipboard when they want to move text from one place to another, the ability to have multiple columns on screen and to format paragraphs without dropping in a new ruler.

Word 1.05 doesn't look that much like Macintosh programs, though. And many people have stuck with *MacWrite* because they aren't willing to put in the time it takes to learn how to make full use of *Word*'s power. It's not as if there aren't other choices; after all, *Word* 1.05 isn't the *Excel* of word processors.

While *MacWrite* and Microsoft *Word* 1.05 hinted at what Macintosh could do with text, we have been waiting for a word processor to fulfill the prophecy. Now there are several new word processors for the Macintosh. They all go far beyond *MacWrite* and *Word* 1.05 in terms of features and functions. But does any of them really get it right?

CONTESTANTS TAKE THE FIELD

If you were to throw *Laser Author*, *MindWrite*, *WriteNow*, *Word* 3.0 and *Word Handler* into combat, which would emerge victorious? The answer, unfortunately, may be none of them. Each program takes a unique approach to word processing, with different sets of design goals and decidedly different styles. In some respects, this makes distinctions clear cut, and if you favor one approach over another the choice should be easy. The truth is, though, that none of them really stands out from the rest as the "word processor of choice."

Word Handler and *WriteNow for Macintosh* resemble *MacWrite*, intentionally, but offer more functions and increased control over how pages are put together. Both are easy to use and fix many of the things found lacking in *MacWrite*, but both have significant quirks of their own.

Laser Author and *Word* 3.0 offer many more bells and whistles than anyone has a right to expect. Both programs also assume the burden of page layout, previously left to programs like *PageMaker*, *ReadySetGo* and *MacPublisher*, and concern themselves with simplifying the process of creating lengthy, complex or very technical documents. In many ways they succeed, but they sometimes end up complicating things even more.

MindWrite is the most unusual program of the lot, and thereby the most interesting. *MindWrite* is an outliner that grew up to be a word processor. It sees writing as a process that begins with simple ideas that are expanded, reorganized and clarified into a coherent whole. Because of this approach, *MindWrite* may be the easiest of the new word processors to relate to — or it could be the most difficult, depending on how you work.

Whether one of these five is the best of all possible tools for you may be a decision best left to you and your muse. But this article will take a hard look at what they can do — and

KAREN STOLFER

GET IT WRITE

HEAD TO HEAD

	LaserAuthor	MacWrite 4.5	MindWrite	WordHandler
Automatic Pagination	Yes	Yes	Yes	Yes
Change font size by points	Yes	No	No	No
Change leading by points	Yes	No	No	No
Columns on screen	Yes - no limit	None	No	No
Command Key options	User definable	For some actions	For most actions	For many actions
Footnotes	No	No	No	No
At end of page	No	No	No	No
At end of document	No	No	No	No
Automatic numbering	No	No	No	No
Glossary	Yes	No	No	Yes
Guttering	Yes	No	Left only	No
Headers/Footers	Yes	Yes	Yes	Yes
Odd/Even page option	No	No	No	Yes
First page only option	No	No	Yes	No
Multiple in one document	No	No	No	No
Horizontal Scrolling	Yes	No	No	Yes
Hyphenation	No	No	No	No
Manual soft hyphen	No	No	No	No
Automatic hyphenation	No	No	No	No
Kerning	Yes - manual	No	No	No
Multiple Windows	Yes	No	Yes - no limit	Yes - up to 4
On same document	No	No	Yes	No
Tiling (Auto Sizing)	No	No	Yes	No
On-line Help	No	No	Yes	Yes
Outlining	No	No	Yes	No
Auto Numbering	No	No	Yes	No
Mark and Gather	No	No	Yes	No
Reads Formats				
Text Only	Yes	Yes	Yes	Yes
MacWrite	No	Yes	Yes	Yes
MS Word	No	No	No	No
Other	Acta, ThinkTank	None	ThinkTank	No
Rulers	Format by section	One	Multiple	One
Display centimeters	Yes	No	No	No
Display picas/points	Yes	No	No	No
Global change	No	Yes	No	No
Relative change	Yes - by section	No	No	No
Save and restore Clipboard	No	No	Yes	No
Searching	Pattern Matching	Find/Change text	Pattern Matching	Find/Change text
Search selection only	No	No	Yes	No
Search for Tab/Return	No	No	Yes	No
Search on attributes	No	No	No	No
Wildcard search	Yes	No	Yes	No
Select items not together	No	No	Yes	No
Sorting	No	No	Yes	No
Spell Checking	No	No	No	No
Word Count	Yes	No	Yes	Yes
Count Paragraphs	No	No	Yes	No
Count Characters	Yes	No	Yes	No
Writes Formats				
Text Only	Yes	Yes	Yes	Yes
MacWrite	No	Yes	Yes	Yes
MS Word	No	No	No	No
Other	No	No	No	No
Memory Required	512K	128K	512K	512K
Retail Price	$199.95	$125.00	$125.00	$79.00

	WriteNow	MS Word 3.0
	Yes	No
	No	Yes
	Yes	Yes
	Yes - up to 4	Up to 6
	For most actions	For all actions
	Yes	Yes
	Yes	Yes
	No	Yes
	Yes	Yes
	No	Yes
	Yes	Yes
	Yes	Yes
	Yes	Yes
	Yes	No
	Yes	No
	Yes	Yes
	Yes	Yes
	Yes	Yes
	No	Yes
	No	No
	Yes - no limit	Yes
	No	No
	No	No
	No	Yes
	No	Yes
	No	Yes
	No	No
	Via Translator	Yes
	Via Translator	Yes
	Via Translator	Yes
	No	Word MS-DOS
	One	One
	No	Yes
	No	Yes
	Yes	No
	Yes	No
	No	No
	Find/Change text	Find/Change text
	No	No
	No	No
	No	No
	Yes	Yes
	No	No
	No	No
	Yes	Yes
	No	Yes
	No	No
	No	No
	Via Translator	Yes
	Via Translator	Yes
	Via Translator	Yes
	No	Word MS-DOS
	128K	512K
	$175.00	$395.00

how they feel — and provide one writer's opinion of how they match up against one another.

LASER AUTHOR

Laser Author began life in Britain as *MacAuthor* a very long time ago, long even by Macintosh word processor standards. A variety of beta versions have been floating around this country since November 1985. In fact, this program may hold the record for the longest beta period in history. People have been asking the question "Where is *MacAuthor?*" for over a year. The program was released in Britain as *MacAuthor* in April 1986, but in the United States that name already belonged to an applications authoring system from EduDisk. Firebird, the U.S. distributor, has licensed the right to distribute the program in this country under the name *Laser Author*. Although some changes have been made to clean up the program and make it more American in spots, *Laser Author* is essentially the program that was known far and wide as *MacAuthor*.

One reason the program took so long to finish was that it changed concept in midstream. It was originally intended to be a word processor for technical documents — scientific and mathematical research, and so on. But just as the program was nearing completion, desktop publishing took off and the developers, Mike Glover and Keith Lander, decided to enhance the product and include page layout capabilities. They went back to the drawing board and came up with a word processor of some power.

Laser Author uses the concept of frames, also seen in *Ragtime*, another European creation. Frames are rectangular windows on a page that can be filled with either text or graphics. The great advantage of frames is that they can be virtually any size and occupy any position on the page. They can be used to pour text into columns of any width or height, and since frames can sit next to one another or be nested within other frames, you can place text and graphics side by side, wrap text around a picture, have columns of varying sizes on the same page and so on. Frames are built manually so you have to size and position columns yourself, using screen position coordinates that are displayed as the frame is being drawn.

Laser Author has a unique way of formatting paragraphs, pages and text. Instead of attaching rulers to new formats, you create styles. Let's say that you like to type your letters in 12-point plain Geneva, but you want your company's name to be in 14-point Venice bold every time it's used. With *Laser Author* you can create the style 14-pt. Venice bold, name it Company, and assign it a command key, say COMMAND-A. The name Company now appears in the Text menu, and if you type COMMAND-A, you automatically begin typing in 14-pt. Venice bold.

This same concept of styles works for titles and paragraphs. Type a command key associated with a particular paragraph format and you begin typing in that format. Or, select a piece of text and reformat it with the press of a single key. What's more, a set of styles can be saved as a stationery pad and reused over and over again, creating style sheets.

The biggest problems with *MacAuthor* as it was released in Britain were speed, stability and some oddities with the display. *Laser Author* appears to have corrected the stability problem. The version I looked at is very solid, and its speed has been improved. Before, the screen was unable to keep up with a fast typist. This is no longer a problem unless there is a lot of graphic information on the screen.

The display still has difficulties, though, at least in my version (not, by the way, Firebird's release version). If there are frames on the page (you can enter text without creating frames — just filling the page), the screen is completely redrawn after paste operations. With graphics frames on screen, the redraw is slow and things jump around a bit as they try to find the correct place to come to a halt. They finally do end up in the right place, but visually the process is painfully distracting. The screen is also redrawn after lengthy entries, if you move the cursor away

GET IT WRITE

from the point you stopped typing (to edit another paragraph, for example.)

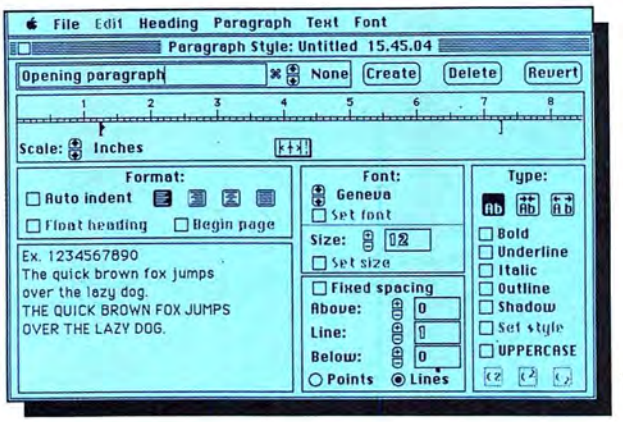
Laser Author has an impressive list of features, including manual control over point size (text can be increased by points up to 120), leading (line spacing), and even kerning. You can, using COMMAND,COMMA and PERIOD, close or expand the space between characters one point at a time. This is great, particularly when creating titles and large headlines. You can subscript or superscript to seven levels, back the cursor over an existing character and type over it. This is a leftover from the technical word processor concept, and *Laser Author* is ideal for anyone who has to place formulas within text. You can also change case of text (to all upper, all lower, or title style, with first letters in caps and the rest lower case), and search for almost anything using wild cards and formulas.

If the display problems were fixed, *Laser Author* might just be the word processor of choice, but it is complicated and requires a great deal of learning time. And there are a lot of things it doesn't have, like spell checking and automatic footnoting. If your word processing needs are fairly simple, or require these missing features, you might want to look to one of the other products instead.

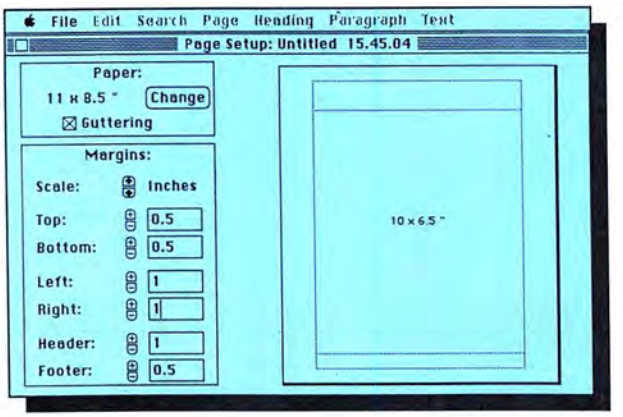
WRITENOW

I'm putting this one next because, oddly enough, it was once known as *MacAuthor,* too. There was much confusion several months back when people threw around that name. Did they mean *MacAuthor?* or *Mac Author?* or *MacAuthor?* EduDisk made it quite clear that there was only one *MacAuthor,* which is why the other guys now have new names. *WriteNow* was developed by Solaster Industries, bought by Steve Jobs' new company, NeXT, and is being marketed by T/Maker.

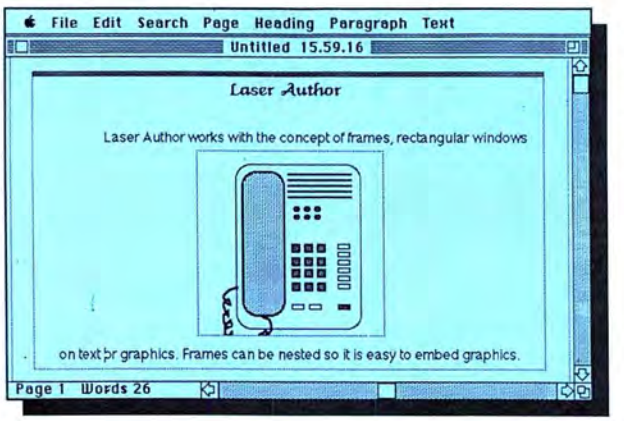
In terms of features, *WriteNow* is a fairly impressive, basic word processor — basic, because it makes no pretensions of page layout capabilities. It's reasonably fast, has a pretty good spelling checker built in, provides a tremendous amount of control over headers and footers, and



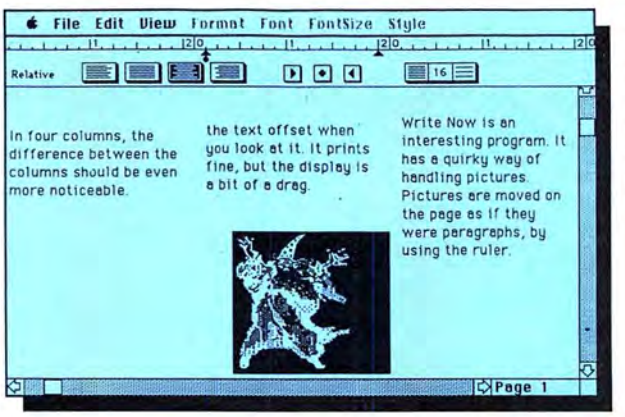
The *Laser Author* window where styles are created for text, pargraphs and headings.



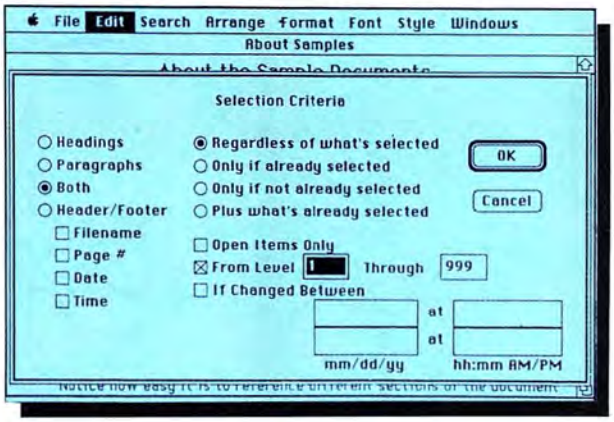
The *Laser Author* Page Setup window lets you see precisely where margins and header/footer text will display on the page.



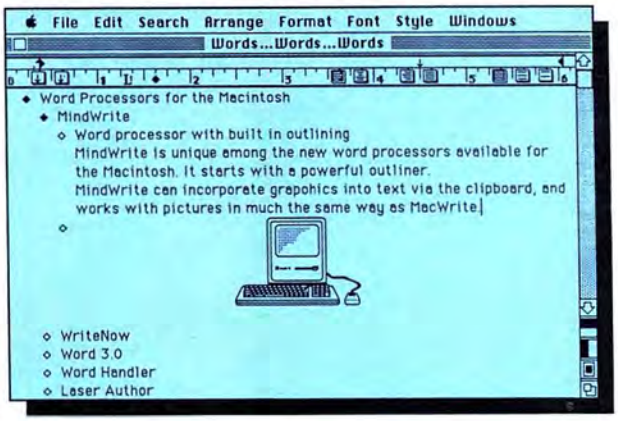
A graphics frame nested in a *Laser Author* text frame. The text for the title and the body paragraph were formatted with a single command key.



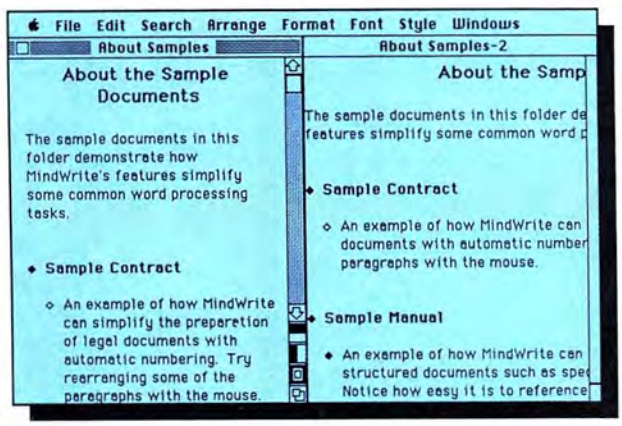
Three of four columns that have been set on a *WriteNow* page. Each column is shown offset slightly above the one to its left. The columns print fine, but they *always* display this way.



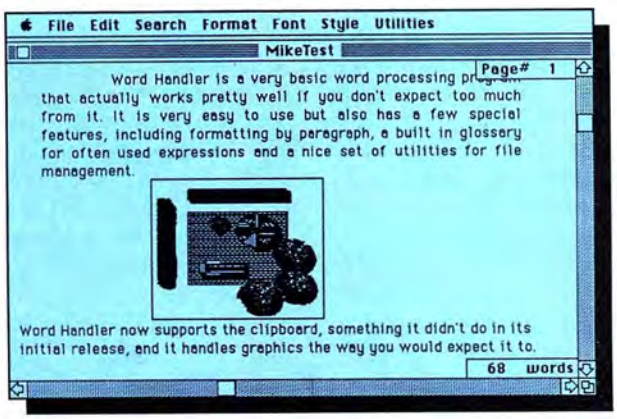
This *MindWrite* dialog box gives you tremendous control over what text is selected for formatting or printing.



A *MindWrite* outline, with a body paragraph and embedded graphics.



Two windows on the same *MindWrite* document. The left window has been set to Wrap to Window, so all the text fits in the space provided. The right window is Wrapping to ruler, the way it will be printed.



***Word Handler*, with a picture embedded.**

offers automatic footnoting, hyphenation, horizontal scrolling so you can have a page wider than the screen, automatic guttering for left and right pages, and the ability to use multiple columns.

These are all good features and well implemented, for the most part, but *WriteNow* has some serious deficiencies.

1. *WriteNow* is fast — until you have long paragraphs or graphics, then it slows down dramatically.

2. Columns. I don't think I would ever work in columns within a word processor, it gets too weird. You can always place columns on a page later. But if you are going to work in columns, don't do it in *WriteNow*. For some reason, the screen displays columns offset. That means that all of column two sits slightly higher on the screen than column one. Even though the manual warns you about this, when you first see it happen it makes you crazy. Worse yet, if you have three columns, the third is offset above the second by the same amount, so you are looking at a page that takes off uphill.

Multiple columns print just fine, again as the manual says, but having the screen display like this is just plain awful.

3. *WriteNow* refuses to save a file as text only. You can't do it. You have to manipulate the file with a separate program called *Translator*. This is also true when you want to read text, *MacWrite* or *Word* files. You can't do it directly, they have to be translated. The *Translator* is a pain to use and shouldn't be there.

4. Rulers. The *WriteNow* ruler looks pretty much the same as *MacWrite*'s, although you can't simply select 1½-line or double spacing. You can increase leading a point at a time, which is nice, but you can't just click on double space, you have to set it manually — one point at a time. There are a few quirks in the ruler, too, like an audible click each sixteenth of an inch (you can turn this off, though, thankfully).

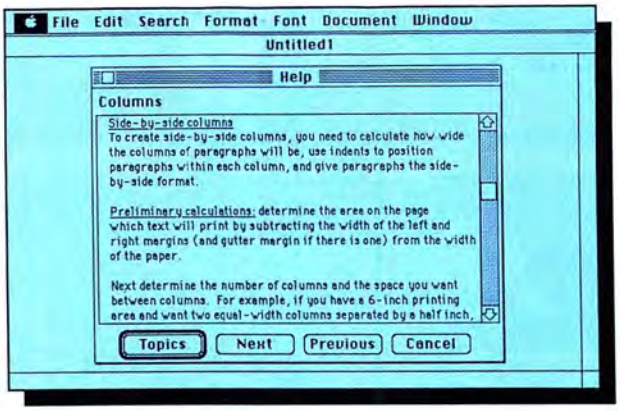
5. Although you can have many different headers and footers, attached to the same or different pages, working with them is not very

intuitive. The program defaults to a four-line blank header and footer on every page, and this is a pain unless you particularly like four-line blank headers and footers.

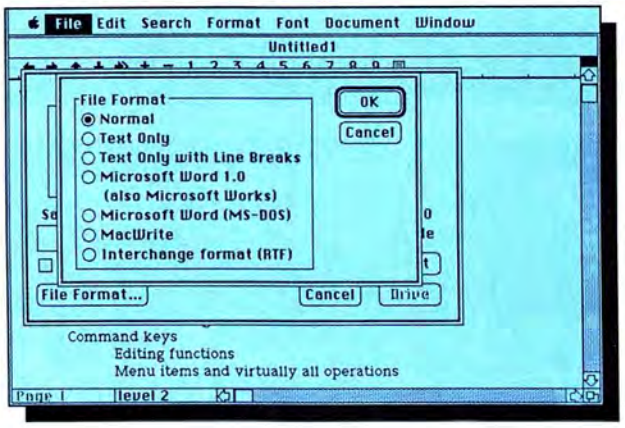
The first time you go in to look at a header or footer, you have to select "Add Header/Footer," even though one is already there and you aren't actually adding a new one. Once you've edited or eliminated the default header/footer, selecting Add Header/Footer adds a new one. To edit an existing header/footer, you select "View" instead of Add. This latter process makes sense, so why have it be different the first time? It's easy to end up with multiple unwanted headers and footers when all you want to do is get rid of the default blank lines.

6. Page Wrap factor. What, you may ask, is that? Good question. The page wrap factor is "the height of the largest line that may continue from one page to the next." That's from the manual, but it didn't tell me much either. You set the Page Wrap factor in Page Setup (the default is 24 — points, presumably). What I really love, though, is the warning the manual gives about being careful when you set the page wrap factor so you don't have collisions with the header and footer region. Come on, guys, I don't want to have to mess with this crap, that's what the computer is for.

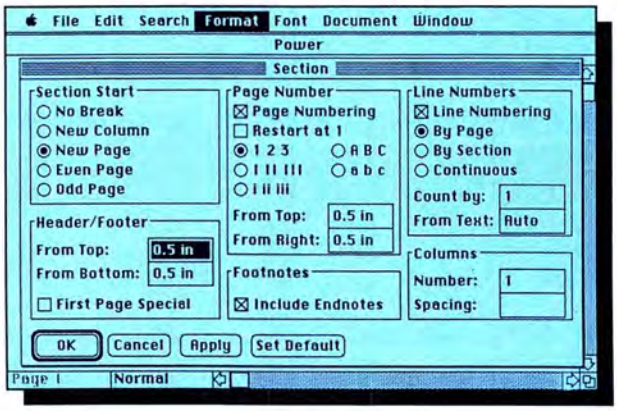
To be fair, *WriteNow*'s automatic footnoting feature is nice, as is hyphenation, and the dictionary is pretty good. But the way *WriteNow* does things goes well beyond quirky and treads dangerously close to the bizarre. *WriteNow* makes you work too hard and overlook too much for what it gives in return.



The description of side-by-side columns from the *Word* Help file.



***Word* lets you save files in an incredible assortment of file formats.**



The *Word* Section formatting dialog box. No shortage of options.

MINDWRITE

MindWrite also went through several name changes, having been advertised initially as *PreWrite* and then as *MultiWrite*. *MindWrite* is fascinating in concept and operation. Although it's billed as a power word processor with integrated outlining, this is not really accurate. Instead, *MindWrite* is an outliner that does full word processing. What's the distinction? *MindWrite* sees everything as an outline. You can use *Mind Write* to write letters, memos, reports, articles, whatever, without ever seeing the outlining functions — but they're always there. In *MindWrite*, every paragraph is a heading in an outline. The manual spends one small chapter of the tutorial on word processing, with the bulk of its pages devoted to outlining.

Many of us work with outlines, using them to create lists or to organize ideas before writing. Some people use *ThinkTank* or *MORE* for all their word processing, even though neither program is really intended for that purpose. It is often easier to work from an outline than from scratch. The idea behind *MindWrite* is that you use an outline to generate ideas, categorize and organize them, then stay in *Mind Write* to do your letter, report or article, and have available all the editing features of a true word processor.

As an outliner, *MindWrite* is very easy to use, and very true to the Mac

interface. It resembles *ThinkTank,* but editing and manipulating headlines and subheads is easier in *MindWrite.* A hand cursor is used to move headlines to the left or right, and command key combinations give you full control over headlines at any level.

Once an outline is created, you can sort and even scramble sections of it as a way to help bring ideas together or generate new ideas. You can add body paragraphs at any point so that you gradually expand the outline into a document. It is then easy to reformat the outline into paragraph style, using the headlines as section headings if you want, or removing them altogether.

MindWrite lets you open multiple windows on the same document, so you can look at your text as an outline in one window, and in paragraph style in another. This is very handy. In addition, you can set the program to word wrap on the window, so that you can see all of a document even in a window narrower than the page. This only affects the screen display — the document will still print according to ruler settings.

Which brings me to the first of several problems with *MindWrite. MindWrite* makes you insert new rulers to change formatting, *a la MacWrite.* And there is no horizontal scrolling in *MindWrite.* To extend the right margin beyond the default setting (6 1/16 inches, with the left edge of the page at 0) you have to move the window to the left edge of the screen, resize the window to show more of the page, and then adjust the margin marker (I couldn't find this in the manual, but discovered it by experimenting). If you want a wide margin, you may have to move and resize the window several times. That's a drag.

When you work on a page with margins that extend past the screen, you won't be able to see what you are typing outside the range of the screen unless you set the program to Wrap to Window instead of Wrap to Ruler. Of course, once you've done that you're no longer really in a WYSIWYG mode, because the document will print with different margins than the ones you see on the screen.

You can embed graphics in text in *MindWrite,* but selecting them is rather awkward. You click in the left margin next to a graphic, rather than clicking on the graphic itself. This is a trivial annoyance, but it's a distraction. And sometimes the display doesn't behave properly, with odd characters left hanging about, especially after backspacing or paste operations.

MindWrite does have some excellent features, though. Its selecting and searching options are among the most powerful I've seen, because it's based on outlines. Selection affects the moving and manipulating of headlines or paragraphs, as well as format changes and printing.

MindWrite has a Launch command in the File menu that quits *MindWrite,* properly closes any open documents, then launches another application without quitting to the *Finder.* This is a great little timesaver.

You can time- and date-stamp paragraphs and have the program remember the last time something was changed, and select all items changed since a certain date. Nifty. And *MindWrite* does a superior job of handling word counts, recording every character, every word separated by a space and every paragraph (separated by a carriage return). In addition, it tells you the average word length, and will do a word count based on a set number of characters per word (you can set the number), if you want.

MindWrite's faults are more annoying than they are truly troublesome, but they are there and can't be overlooked. Whether *MindWrite* is the program for you depends to a large extent on how you think and write. If you like writing from an outline, *MindWrite* is an excellent program. But if you don't work this way normally, it might drive you crazy.

WORD HANDLER

Word Handler is a good little program. It was the *first* word processor to come out for the Mac other than *MacWrite* and *Word,* but ran into some problems early on for two reasons. First, the original release version didn't support the Clipboard and couldn't handle graphics. Second, in order to get a quick start, the publisher, Applied Logic Systems, offered a special promotion in the first three months of release.

If you sent the company your copy of *MacWrite,* you got *Word Handler* for $29.95, $50 off the retail price. The company's ads weren't very clear at first about the details of the arrangement, though. Many people thought they could return *Word Handler* if they didn't like it, get their *MacWrite* back and get a refund. They *could* return *Word Handler,* get *a* copy of *MacWrite* back, but there was initially no plan to give a refund — in fact, there was a substantial extra charge for shipping and handling. After a bit of an outcry from the concerned users and the Macintosh press, the company resolved the problem.

Now, this introductory offer is no longer in place. *Word Handler* is a straight $79.95 and it handles graphics and the Clipboard just fine. As a result, *Word Handler* should be considered seriously as an alternative to *MacWrite:*

Word Handler is not exceptionally powerful, but it is more capable than *MacWrite* in many ways. *Word Handler* lets you work in an area wider than the screen and provides horizontal scrolling. It formats text by section, so you don't have rulers dropped in all over your page. It lets you change the case of selected text, from upper to lower or vice versa.

Word Handler has a glossary where you can store abbreviations for words or phrases that you use a lot. And there is a superb set of file management utilities that let you append one document to another, rename or delete a file without quitting to the *Finder,* open *MacWrite* documents and save or open text only files.

Word Handler has its oddities, of course. Documents are saved automatically on creation, and also when you close them or quit the program. You don't have the option of returning a document unchanged — no

(continued on page 184)

Bikers to ban

SOFTWARE

NCP denotes not copy-protected.
CP denotes copy-protected.

Affinity Microsystems ... NCP
Tempo *(power user's macro utility)* ..... $69.
Altsys ... NCP
Fontastic *(create your own fonts)* ..... 27.
Ann Arbor ... NCP
FullPaint *(open four documents at once)* .. 55.
ATI ... CP
Teach Yourself Multiplan or Excel ..... 39.
Batteries Included ... NCP
The Mac BatteryPak *(9 desk accessories)* 27.
HomePak or Time Link ..... 29.
Thunder! *(50,000 word spelling checker)* .. 29.
Borland International ... NCP
Sidekick w/Phonelink. ..... 59.
Reflex *(information management analysis)* 59.
Turbo Pascal ..... 65.
BPI Systems ... NCP
General Accounting *(full-featured)* ..... 229.
BrainPower ... NCP
Think Fast *(improves recall)* ..... 23.
StatView *(statistics package)* ..... 59.
Graphidex *(DA graphics organizer)* ..... 75.
Designscope *(electronic circuit design)* .. 129.
StatView 512+ *(req. external drive, 512k)* ... 179.
Broderbund ... CP
Print Shop *(create cards and memos)* ..... 49.
Geometry *(over 350 problems!)* ..... 69.
CAMDE ... CP
Nutricalc *(diet & nutrition analysis)* ..... 49.
Nutricalc Plus ..... 175.
Casady Company ... NCP
Fluent Fonts *(two-disk set)* ..... 29.
Fluent Laser Fonts *(Bodoni, Calligraphy, Monterrey, Prelude, Ritz, & Sans Serif)* . *each* 49.
Central Point Software ... NCP
Copy II Mac *(includes MacTools)* ..... 20.
Challenger Software ... NCP
Mac3D *(3D graphics, CAD features)* ..... 129.
Chang Labs ... CP
Rags to Riches Ledger ..... 125.
Rags to Riches Receivables *(req. 512k)* ... 125.
Rags to Riches Payables *(req. 512k)* ..... 125.
Rags to Riches Three Pak ..... 299.
Inventory Control ..... 245.
Professional Billing ..... 245.
Cortland ... CP
TopDesk *(7 new desk accessories)* ..... 39.
Creighton Development ... NCP
MacSpell+ *(spell checker, req. 512k)* ..... 55.
Cricket Software ... NCP
Statworks *(statistical package)* ..... 79.
Cricket Graph *(multiple windows)* ..... 129.
DataViz ... NCP
MacLink Plus *(transfer Mac/IBM data)* .... 159.
Desktop Graphics ... NCP
DrawArt *(MacDraw artwork, req. 512k)* .... 29.
DrawForms *(requires MacDraw)* ..... 30.
Digital, etc. ... NCP
Maccountant *(integrated accounting)* ..... 99.
Turbo Maccountant ..... 275.
Includes GL, AR, AP, Payroll, & Invoicing.
Dow Jones ... CP
Straight Talk *(access News/Retrieval)* ..... 62.
Spreadsheet Link ..... 65.
Market Manager PLUS ..... 129.
Dreams of the Phoenix ... NCP
Day Keeper Calendar ..... $35.
Quick & Dirty Utilities Vol. 1 or Vol. 2 ..... 35.
Twelve-C Financial Desk Accessory ..... 35.
Phoenix 3D *(3D graphics)* ..... 65.
Dubl-Click Software ... NCP
World-Class Fonts! Vol. One or Vol. Two .... 29.
World-Class Fonts! *(both Volumes)* ..... 49.
Calculator Construction Set. ..... 39.
EDO Communications ... CP
Laserworks *(requires 512k, Laserwriter)* ... 229.
Electronic Arts ... CP
Deluxe Music Construction Set ..... 32.
Enabling Technologies ... NCP
Easy3D *(create solid 3D objects)* ..... 79.
1st Byte ... CP
First Shapes *(preschool learning tool)* ..... 32.
Speller Bee, KidTalk, or Mathtalk ..... 42.
Smoothtalker *(speech synthesis)* ..... 52.
Forethought ... NCP
Factfinder *(free-form info organizer)* ..... 49.
FileMaker *(custom forms & reports)* ..... 79.
FileMaker Plus *(feature-packed database)* 159.
Fortnum/Southern
MacInooga Choo-Choo *(512k, NCP)* ..... 21.
MacChemistry *(CP)* ..... 89.
FWB Software ... NCP
Hard Disk Backup *(protect hard disk info)* .. 39.
Hard Disk Partition *(speeds up hard disk)* .. 39.
Hard Disk Util *(program backup)* ..... 59.
Great Wave Software ... NCP
KidsTime *(educational, ages 3-8)* ..... 29.
LOC *(strategy game)* ..... 29.
ConcertWare+ *(music composition)* ..... 29.
ConcertWare+ MIDI ..... 75.
Greene, Johnson ... CP
Spellswell *(spelling checker)* ..... special
Hayden Software ... CP
I Know It's Here Somewhere *(handy filer)* ... 20.
Hayden:Speller *(for Word & MacWrite)* ..... 27.
MusicWorks *(songs for your Mac)* ..... 32.
DaVinci Building Blocks *(NCP)* ..... 46.
Home Design *(NCP)* ..... 49.
Score Improvement System for the SAT .... 59.
VideoWorks & MusicWorks Bundle ..... 59.
Ideaform ... CP
MacLabeler *(print disk labels)* ..... 29.
Imagine ... NCP
Smart Alarms *(DA reminder system)* ..... 39.
Impulse ... NCP
Comic Strip Factory *(create cartoons)* ..... 65.
Industrial Computations ... NCP
Powermath *(equation solving tool)* ..... 52.
Infosphere ... CP
LaserServe *(network software)* ..... 125.
MacServe *(network software)* ..... 250.
Innovative Data Design ... NCP
Paste-Ease *(requires Paint program)* ..... 35.
MacDraft *(new updated version, 512k)* .... 179.
Kensington ... NCP
Graphic Accents *(req. Paint program)* ..... 29.
Type Fonts for Text *(16 new fonts)* ..... 29.
Type Fonts for Headlines *(req. 512k)* ..... 42.
Layered ... CP
Notes...For Excel ..... 42.
Front Desk ..... 75.
Legisoft/Nolo Press ... NCP
WillWriter 2.0 *(prepare your own will)* ..... 32.
Linguist's Software ... NCP
Tech *(1000 different symbols)* ..... 59.

FOREIGN LANGUAGE FONTS
MacCyrillic ..... $39.
SuperFrench/German/Spanish ..... 39.
MacHieroglyphics, MacKana/Basic Kanji, MacSemitic/Coptic/Devanagari, MacKorean, MacArabic, MacGreek, MacHebrew *each* 59.
SuperGreek New or Old Testament ..... 79.
MacGreek/Hebrew/Phonetics ..... 89.
LaserGreek ..... 79.
LaserFrench/German/Spanish. ..... 79.
LaserCyrillic ..... 115.
Living Videotext ... NCP
ThinkTank 512k *(outline processor)* ..... 99.
More *(outlines, windows, & tree charts)* .. 159.
MacMemory ... NCP
MaxRam & MaxPrint *(Ramdisk, spooler)* .. 39.
Magnum ... NCP
Natural Sound Effects ..... 27.
Natural Sound Cable & Editor Disk ..... 89.
McPic - Volume 1 or Volume 2 ..... 29.
The Slide Show Magician 1.3 *(CP)* ..... 35.
Manhattan Graphics ... NCP
Desk Design *(2 volume set)* ..... 37.
Ready,Set,Go!3 *(desktop publishing)* .... 175.
Microsoft
Flight Simulator *(the Mac takes flight, CP)* 33.
Learning Multiplan and Chart *(2 disks, CP)* 39.
Basic Interpreter 3.0 *(NCP)* ..... 59.
Chart 1.0 *(42 chart styles, CP)* ..... 72.
Multiplan 1.1 *(63 col. by 255 rows, CP)* ... 111.
File 1.04 *(flexible data manager, NCP)* ... 111.
Word 1.05 *(word processor, CP)* ..... 111.
Basic Compiler 1.0 *(NCP)* ..... 125.
Fortran 2.2 *(compiler, NCP)* ..... 169.
Works 1.0 *(integrated tool, NCP)* ..... 189.
Excel 1.03 *(power spreadsheet, NCP)* ... 225.
Miles Computing ... NCP
Mac the Ripper *(req. Paint program)* ..... 27.
Mindscape ... CP
The Luscher Profile *(personality profile)* ... 24.
The Perfect Score: SAT. ..... 47.
ComicWorks *(create your own comics)* .... 49.
GraphicWorks *(newsletters, ads, posters)* 49.
Monogram ... NCP
Forecast *(tax planning)* ..... 41.
Dollars & Sense *(home, small business)* ... 81.
Nevins Microsystems ... NCP
Turbocharger *(disk cache, req. 512k)* ..... 39.
New Canaan MicroCode ... NCP
MDCFinder *(requires 512k)* ..... 20.
Mac Disk Catalog II *(requires 512k)* ..... 32.
Odesta ... NCP
Helix *(req. 512k, external drive)* ..... 105.
Double Helix *(relational, custom menus)* . 289.
Palantir ... CP
MathFlash or WordPlay ..... 26.
MacType *(typing instruction)* ..... 26.
Inventory Control, GL, or AR ..... *each* 69.
inTalk *(communication to emulation, NCP)* 79.
PBI Software ... NCP
Icon Switcher *(customized icons)* ..... 14.
Icon Fun & Games or Business Libraries .. 14.
HFS Locater *(DA organizer for HFS)* ..... 27.
Hard Disk Backup *(supports MFS, HFS)* .. 29.
Peachtree ... CP
Back to Basics GL, AP, or AR ..... *each* 89.
Personal Computer Peripherals ... NCP
HFS Backup ..... 39.
ProVUE Development ... NCP
OverVUE 2.0 *(power-packed database)* .. 149.

Power Users.

Contest Winner #4

Name: Becky Joseph, Harley Owners Group, Chula Vista

System: Mac Plus

Applications: HOG newsletter/database; anthropological research.

Becky Joseph uses her Mac to help power the Chula Vista Harley Owners Group. They meet on the first Wednesday of the month, 7 PM at South Coast Harley Davidson.

The Righteous Brothers (and Sisters).

Our latest contest winner is Becky Joseph, the one in the middle plugged into that lean mean micro machine.

Becky wrote to inform us that she'd consulted with her picturesque colleagues and "we all think I should get one of your prizes." We all tend to agree. Who are we to question the wisdom of the Chula Vista, CA Chapter of the Harley Owners Group? HOG is the largest motorcycle club in the world. Frankly, their powers of persuasion were just too obvious to ignore.

But do they use Macs?

Of course they use Macs. How could a motorcycle club ride their organizational beast without one?

It takes a lot of planning to get 50 odd bikers and their families together for a Poker Run. (During a Poker Run you are handed playing cards at several checkpoints. By the time you get to the destination – a pub – you may have a royal flush.)

Becky uses Thunderscan to digitize Harley art into their newsletter; ReadySetGo! to put it together; and Excel to manage the group's database. And, in her spare time, she uses her Mac for analyzing Indonesian textiles. (She first found out about the Mac from the Apple dealer in Java).

Look, she deserves the prize. So what if the Chapter President "doesn't know a database from a bale of computer paper"?

And, what about you? Do you run your Mac full throttle? Your story could be worth five bones ($500) in free add-ons and software.

"Our Connection."

MacConnection

14 MILL STREET, MARLOW, NH 03456 1-800/Mac&Lisa or 603/446-7711

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Please circle 82 on reader service card.

kers beat a path to

Mail Manager Template . . . . . $29.
Personal Finance Template . . . . . 29.
Rubicon Publishing ... CP
Silver Palate Collection *(NY's finest!)* . . . . . 29.
Dinner At Eight *(recipes to wines)* . . . . . 35.
Dinner At Eight-Silver Palate Bundle . . . . . 59.
Satori ... NCP
BulkMailer *(mailing lists)* . . . . . 75.
BulkMailer Plus *(up to 90,000 names)* . . . 225.
Legal Billing *(attorneys to accountants)* . . 439.
Project Billing *(architects to engineers)* . . . 519.
Silicon Beach Software ... NCP
Accessory Pak 1 *(useful utilities)* . . . . . 21.
Silicon Press *(printer utility, 512k)* . . . . . 42.
SuperPaint *(advanced graphics program)* 59.
Simon & Schuster ... NCP
Mac Art Department *(req. Paint program)* 24.
Paper Airplane Construction Kit . . . . . 24.
Typing Tutor III *(learn to type!)* . . . . . 35.
SoftStyle ... NCP
Colormate Art *(Colormate images)* . . . . . 29.
Colormate *(color printing utility)* . . . . . 49.
Laserstart *(Hewlett-Packard Laserjet)* . . . . . 59.
Decision Map *(make better decisions, CP)* . 85.
Software Discoveries ... NCP
Record Holder *(data manager)* . . . . . 45.
Software Ventures ... NCP
Microphone *(communications)* . . . . . 65.
Solutions, Inc. ... NCP
Glue *(creates "print to disk" capability)* . . . 45.
Springboard
Art a la Mac Vol. 1-People & Places *(NCP)* 23.
Art a la Mac Vol. 2-Variety Pack *(NCP)* . . . . 23.
Easy as ABC *(ages 3-6, letters, CP)* . . . . . 29.
Early Games *(ages 2-6, counting, CP)* . . . . 29.
State of the Art ... CP
Electric Checkbook *(print checks)* . . . . . 29.
Survivor Software ... NCP
MacMoney *(financial planner)* . . . . . 49.
Symmetry ... NCP
Acta *(outline/writing desk accessory)* . . . . . 39.
PictureBase *(clip art manager, 512k)* . . . . . 45.
T/Maker ... NCP
ClickArt Personal Graphics . . . . . 29.
ClickArt Effects . . . . . 29.
ClickArt Publications . . . . . 29.
ClickArt Letters Vol. 1 or Vol. 2 . . . . . 29.
ClickArt Holidays *(Valentine's Day, Easter)* . . 29.
ClickArt Business Image . . . . . 29.
Bombay, Plymouth, or Seville Laser font . . . 59.
Write Now *(word processor)* . . . . . 119.
Target Software ... NCP
Merriam Webster's Thesaurus . . . . . 29.
MacLightning *(interactive spell checker)* . . 53.
Medical or Legal Dictionary . . . . . 53.
Voila! *(desk accessory outliner)* . . . . . 53.

MacConnection Special of the Month
through March 31, 1987

GREENE, JOHNSON
Spellswell
Effective and easy to use spelling checker. Checks capitalizations, hyphenations, homonyms and duplicate words like "the the." Includes 93,000 word user modifiable dictionary.

- Powerful stand-alone program
- Not copy-protected
- Requires 512k Mac

Spellswell 1.3 . . . . . $49.

Telos Software ... CP
Business Filevision *(512k, external drive)* 199.
Think Educational ... CP
MacEdge II *(math & reading)* . . . . . 28.
Mind Over Mac *(5 challenging games)* . . . 28.
Think Technologies ... NCP
Lightspeed Pascal *(includes debugger)* . . . 89.
Lightspeed C *(top-rated C Compiler)* . . . . 129.
TML Systems ... NCP
TML Source Code Library . . . . . 59.
TML Pascal *(compiler, req. 512k)* . . . . . 69.
TrueBasic ... NCP
True BASIC *(fast, flexible & portable)* . . . . . 89.
Algebra II, Pre-calculus, Calculus, Trigonometry, 3D Graphics, Discrete Math, Probability & Chippendale utilities . . . *each* 36.
TrueSTAT *(statistics)* . . . . . 59.
Runtime *(create stand-alone applications)* . 59.
Unicorn ... CP
Animal Kingdom *(ages 6-12)* . . . . . 29.
Decimal Dungeon *(math, ages 9 and up)* . . 29.
Fraction Action *(arcade style math game)* 29.
Mac Robots *(pre-school program)* . . . . . 29.
Math Wizard *(math games, ages 5-10)* . . . . 29.
Read-A-Rama *(reading, ages 5-8)* . . . . . 35.
William & Macias ... NCP
myDiskLabeler *(design & print labels)* . . . . 25.
myDiskLabeler w/Color *(req. Imagewriter II)* . 34.
myDiskLabeler w/Laserwriter option . . . . . 39.

GAMES

Accolade ... CP
Hardball *(baseball simulation)* . . . . . 27.
Activision ... CP
Mind Shadow *(Who am I?)* . . . . . 27.
Hacker *(you're on your own!)* . . . . . 27.
Hacker II *(breach Russian computer)* . . . . . 30.
Borrowed Time *(murder mystery)* . . . . . $27.
Shanghai *(Mah Jongg strategy)* . . . . . 27.
Alter Ego *(male or female version)* . . . . . 36.
Addison-Wesley ... CP
Puppy Love *(your dog will love it!* . . . . . 15.
Ann Arbor Softworks ... CP
Grid Wars *(3D graphic arcade)* . . . . . 22.
Artworx ... CP
Bridge 4.0 *(sharpen your skills)* . . . . . 21.
Avalon Hill ... CP
MacPro Football *(req. 512k)* . . . . . 32.
Blue Chip ... CP
Millionaire *(stock market)* . . . . . 35.
Tycoon *(commodities)* . . . . . 35.
Baron *(real estate)* . . . . . 35.
Squire *(personal finance, req. 512k)* . . . . . 35.
Broderbund Software ... CP
Lode Runner *(over 150 levels)* . . . . . 24.
Ancient Art of War *(military strategy)* . . . . . 27.
Toy Shop *(create working models)* . . . . . 39.
Bullseye ... CP
Ferrari Grand Prix *(Formula One racing)* . . . 35.
Fokker TriPlane Flight Simulator . . . . . 35.
Electronic Arts ... CP
Archon *(arcade strategy, req. 512k)* . . . . . 27.
Skyfox *(3D graphics)* . . . . . 27.
One on One/Dr J vs Larry Bird *(req. 512k)* . . 27.
Patton-vs-Rommel *(req. 512k)* . . . . . 27.
Pinball Construction Set . . . . . 27.
Epyx ... CP
Rogue *(strategy dungeon classic!)* . . . . . 24.
Temple of Apshai *(4 levels)* . . . . . 24.
Winter Games *(Olympic events)* . . . . . 24.
Hayden Software ... CP
Perplexx *(scrabble-type game)* . . . . . 24.
Sargon III *(9 levels of chess)* . . . . . 29.
Infinity Software ... CP
Grand Slam *(tennis, req. 512k)* . . . . . 28.
Infocom ... CP
Leather Goddesses of Phobos, Moonmist, Ballyhoo, Cutthroats, Hitchhiker's Guide, Planetfall, Wishbringer, Enchanter, Trinity, Zork 1, The Witness *(standard)* . . . . . *each* 24.
Zork II, Zork III, Sorcerer, Suspect, Mind Forever Voyaging *(advanced)* *each* 26.
Spellbreaker *(expert)* . . . . . 29.
Invisiclues *(hint booklets)* . . . . . *each* 6.
MacroMind ... NCP
Maze Wars+ *(play via modem or network)* 32.
Miles Computing ... CP
Fusillade *(arcade maze)* . . . . . 21.
MacAttack *(3D tank simulation)* . . . . . 27.
Harrier Strike Mission *(3D flight simulation)* 27.
MacWars *(3D space simulation)* . . . . . 27.
Mindscape ... CP
Rambo: First Blood Part II . . . . . 24.

1-800/Mac&Lisa 680U

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*Defective software replaced immediately. Defective hardware replaced or repaired at our discretion. Some items have warranties up to five years.

Please circle 82 on reader service card.

our bargains.

Racter *(converse with your Mac!)* . . . . . $27.
Balance of Power *(world politics)* . . . . . 30.
King of Chicago *(req. minimum 512E)* . . . . 30.
Brataccus *(great graphics, req. 512k)* . . . . 30.
Uninvited *(mystery adventure)* . . . . . 30.
Deja Vu *(murder mystery)* . . . . . 33.

Origin Systems ... CP
Exodus: Ultima III *(fantasy adventure)* . . . . 38.

PBI Software ... CP
Strategic Conquest *(multi-user)* . . . . . 35.

Psion ... CP
Psion Chess *(3D and multi-lingual)* . . . . . 31.

QWare ... CP
Orb Quest *(graphic fantasy adventure)* . . . 29.

Sierra On-Line ... CP
Championship Boxing *(knock 'em out!)* . . . 25.

Silicon Beach Software
Airborne! *(CP, the classic!)* . . . . . 20.
Enchanted Scepters *(CP, over 200 scenes)* 21.
Dark Castle *(NCP, arcade action)* . . . . . 28.
World Builder *(NCP, program creator)* . . . . 42.

Simon & Schuster ... CP
Star Trek—The Kobayashi Adventure . . . . 24.

Sir-Tech ... CP
Mac Wizardry *(high-rated fantasy)* . . . . . 36.

Spectrum Holobyte ... NCP
GATO *(submarine simulation)* . . . . . 26.
Orbiter *(space shuttle simulation)* . . . . . 27.
Tellstar II *(No. & So. hemispheres, req. 512k)* 32.

XOR ... NCP
NFL Challenge *(be the coach!)* . . . . . 79.

HARDWARE

Manufacturer's minimum limited warranty period is listed after each company name. Some products in their line may have longer warranty periods.

Apricorn ... 1 year
ApriCord Mac *(Mac Plus parallel interface)*. 75.

Cambridge Automation ... 90 days
MIDI Conductor . . . . . 69.

Curtis Manufacturing ... lifetime
Diamond *(6 outlets)* . . . . . 29.
Emerald *(6 outlets; 6 ft cord)* . . . . . 36.
Sapphire *(3 outlets; EMI/RFI filtered)* . . . . . 47.
Ruby *(6 outlets; EMI/RFI filtered; 6 ft cord)* 55.

Dove Computer ... 90 days
Memory Expansion Units
Mac Snap 524 *(512k to 1 Meg)*. . . . . 159.
Mac Snap Plus 2 *(Mac Plus to 2 Meg)* . . . 309.
Mac Snap 548 *(512k to 2 Meg)* . . . . . 469.
Mac Snap Plus 4 *(Mac Plus to 4 Meg)* . . 1549.

Ehman Engineering ... 1 year
800k External Disk Drive . . . . . 225.

Ergotron ... 1 year
MacTilt *(includes external drive bracket)*. . . 75.
MacBuffer 512k . . . . . 369.
MacBuffer 1024k . . . . . 569.

Hayes ... 2 years
Smartcom II *(communications software)* . . 89.
Smartmodem 1200 or 2400. . . . . call
Smartmodem 1200 or 2400 package . . . . call

IOMEGA ... 90 days
Bernoulli Box *(dual 10 MB w/SCSI)*. . . . 1695.
Bernoulli Box *(dual 20 MB w/SCSI)* . . . . 1995.
Bernoulli Box *(dual 10 MB, Appletalk)*. . . 2195.

Kensington ... 1 year
Appletalk Cable Clips or Connectors. . *each* 1.
Travelling Disk Case. . . . . $6.
Mouseway *(mouse tracking pad)* . . . . . 8.
Mouse Pocket *(for your idle mouse)* . . . . . 8.
Mac Plus System Saver Cover . . . . . 9.
Imagewriter (II) Dust Cover . . . . . 9.
Mouse Cleaning Kit w/Mouse Pocket . . . . . 17.
Disk Case *(holds 36 Mac disks)* . . . . . 19.
Disk Drive Cleaning Kit . . . . . 20.
Tilt/Swivel . . . . . 22.
Universal Copy Stand . . . . . 24.
Polarizing Filter . . . . . 34.
Surge Suppressor . . . . . 35.
A-B Box *(for the Mac Plus)* . . . . . 65.
Control Center. . . . . 65.
System Saver Mac *(complete with fan)*. . . . 65.

Koala Technologies ... 90 days
KAT Graphics Tablet. . . . . 139.
MacVision *(digitizer)*. . . . . 175.

Kraft ... 1 year
3 Button QuickStick . . . . . 49.

Mirror Technologies ... 1 year
FastPort *("SCSI" for your 512k Mac)* . . . . 139.
MagNet 20x *(w/MacServe)* . . . . . 849.
Magnum 20 Tape Backup . . . . . 929.
MagNet 30x *(w/MacServe)* . . . . . 995.
MagNet 40/40 *(40MB, 40MB tape)* . . . . 2695.

Personal Computer Peripherals ... 1 year
MacBottom Hard Disk 20MB *(SCSI)* . . . . 879.

Summagraphics ... 90 days
MacTablet 6" x 9" *(stylus driven)*. . . . . 299.
MacTablet 12" x 12" *(sketching)* . . . . . 399.

Systems Control ... 2 years
MacGard *(surge protection)*. . . . . 55.

Thunderware ... 90 days
Thunderscan *(high-resolution digitizer)* . . 175.
Power Port. . . . . 29.

Western Automation ... 1 year
DASCH RAMdisk 1000k . . . . . 349.
DASCH RAMdisk 2000k . . . . . 399.

DISKS

Single-sided Diskettes
Sony 3½" Disks *(box of 10)* . . . . . 15.
MAXELL 3½" Disks *(box of 10)* . . . . . 15.
Fuji 3½" Disks *(box of 10)* . . . . . 15.
Verbatim 3½" Disks *(box of 10)*. . . . . 16.
3M 3½" Disks *(box of 10)*. . . . . 18.

Double-sided Diskettes
Sony 3½" Disks *(box of 10)* . . . . . 23.
MAXELL 3½" Disks *(box of 10)*. . . . . 23.
Verbatim 3½" Disks *(box of 10)*. . . . . 24.
Fuji 3½" Disks *(box of 10)* . . . . . 24.
3M 3½" Disks *(box of 10)*. . . . . 25.

INFORMATION SERVICES

Compuserve
Compuserve Information Service. . . . . 24.

Dow Jones
Dow Jones News/Retrieval Membership Kit 24.

Source Telecomputing
The Source *(subscription & manual)* . . . . . 30.

ACCESSORIES

Automation Facilities
Floppiclene Drive Care Kit . . . . . 15.
Floppiclene Refill *(ten cleaning disks)*. . . . . 10.
MacPak Complete Care System . . . . . $29.

Clean Image Ribbon Co.
Clean Image Ribbon Kit. . . . . 12.

Computer Coverup
External Disk Drive Cover . . . . . 4.
Imagewriter (II) Cover . . . . . 8.
Mac (Plus) & Keyboard *(two covers)* . . . . . 10.

Diversions
Underware Ribbon *(iron-on black transfer)*. . 9.
Multi-color Transfer Ribbon . . . . . 19.
ColorPack *(includes Colorpens)*. . . . . 19.

Environmental Software Company
Imagewriter II Cover. . . . . 11.
Mac (Plus) & Keyboard Cover . . . . . 15.

I/O Design
Imageware II *(Imagewriter II carry case)* . . . 59.
Macinware Plus *(Mac Plus carry case)* . . . . 69.

Innovative Concepts
Flip & File Micro *(holds 25 disks)* . . . . . 9.
Flip & File *(holds 40 disks)* . . . . . 18.

Innovative Technologies
The Pocket Pak *(holds 6 disks)*. . . . . 10.
The Easel *(holds 20 disks)* . . . . . 15.
The Disk Directory *(holds 32 disks)* . . . . . 18.
The Library *(carousel, holds 80 disks)* . . . . 29.

Kalmar Designs
Teakwood Roll-top Case *(holds 45 disks)* . . 15.
Teakwood Roll-top Case *(holds 90 disks)* . . 22.

Magnum
Mouse Mover *(let your mouse ride!)* . . . . . 14.

Moustrak
Moustrak Pad *(standard 7" x 9")* . . . . . 8.
Moustrak Pad *(large 9" x 11")*. . . . . 9.

Ribbons Unlimited
Imagewriter Black or Color Ribbons. . . . . 5.
Imagewriter Ribbons Six Pack . . . . . 25.
Imagewriter Rainbow Six Pack. . . . . 25.

Smith & Bellows
Mahogany Disk Case *(holds 90 disks)* . . . . 28.
Mac Plus Pack *(covers & disk case)* . . . . . 39.

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THE WORD ACCORDING TO AKER

A piece by piece review of Word 3.0. The long wait was worth it.

[Editor's Note: Both this review and the one by Doug Clapp were written from stable beta copies dated 11/10/86. These betas have run virtually flawlessly, and the only expected changes are to improve the already high speed of operation and cosmetic cleanup. Both the authors and editors at MacUser *have been using* Word *fulltime since receipt. We just SAVE a lot.]*

MICROSOFT'S NEW RELEASE OF *Word* comfortably straddles the word processor/page layout fence: it's a powerful writing tool with strong "document-processor" features.

Word 3.0 is a program of extremes. It bends over backwards to be friendly to the beginner while providing for nearly every wish of the power junkie. It adds some welcome new twists to the Mac user interface, yet sometimes falls short of "friendly," revealing its made-for-IBM-PC origins.

EASY DOES IT

Word originally opens in a "Short Menus" mode, a *MacWrite*-like environment that's easy on the beginner: the menus display only the basic necessities of formatting. For some strange reason, the program also opens in the confusing "Show Paragraph" mode that shows symbols for tabs, paragraphs and spaces.

Short Menus is adequate for memos, letters, reports, and other quick jobs, but not much more. When you switch to Full Menus via an Edit menu command, the full contents of the menus appear, as do the horizontal scroll bar and the window splitter. *Word* remembers which menu mode you were in when you quit, and opens automatically into that mode the next time you run it.

WORD PLUS

In addition to dozens of new features, this new *Word* addresses some of the smaller problems that plagued users of the old *Word:*

- The repagination function is much quicker, and does not repaginate the entire document if you've only made changes to the latter part. Printing a document from some place other than the first page also takes much less time.
- Everything's faster: scrolling, even with lots of graphics; screen refreshes after dismissing a dialog box; Save operations.
- Headers and footers are created in their own windows, with icons that provide time, date and page

BY SHARON ZARDETTO AKER

GARY HOVLAND

number. (Times and dates stay at their original values; they don't change with each printing.) Headers and footers still don't show in the document window — which is preferable to having to scroll through them for every page.

- The ruler has icons for tabs, spacing and justification, with more extensive controls available in the Full Menus ruler than in the Short Menus ruler.
- The Mac Plus numeric key pad toggles between number entry and cursor control at a press of the Clear key. An "N" is displayed in the corner of the menu bar when numbers are available.

STYLISH FORMATTING

You can format your heart out with this program, on both the character and paragraph level. There's a wide variety of styles, including the hidden format, which hides text from view (and from printing) unless the "Show Hidden Text" option is active. The uses of hidden text range from notes to yourself to index/table of contents markers to PostScript commands — anything you don't want printed.

You can also format text so it's condensed or expanded, defining how many pixels you want subtracted or added to the spaces between characters. Superscript and subscript offsets can also be defined, giving you multi-level superscript and subscript capability.

Paragraph formatting includes special controls like Keep Lines Together, Keep With Next Paragraph and Page Break Before. You can number paragraphs according to various schemes, and you can frame them, or put a bar above, below, or to the left side. The special Side-by-Side paragraph format is invaluable in designing page layout.

The big news for many users is the addition of Style Sheets to *Word*. The Style Sheet is a template that defines both character and paragraph formats.

Defining styles can be done on a simple or a sophisticated level. The sophistication comes in when you define a new style based on a preexisting one; when you change the original style, the "core" of the new one is also changed. Another power option is using the Next Style command, which defines the style to be applied after you press the Return key for a paragraph in the current style. So, if you need a right-aligned return address for every letter you type, followed by a left-aligned salutation and then normally-indented text, you can define each style to be followed by the next and have your letter automatically formatted as you type.

GRAPHICS

While the new *Word* doesn't handle graphics the way *Works* does (in a two-layer approach that lets you type right across an inserted graphic), it gives you options enough for both simple embedded graphics and more complicated page layouts.

A graphic is pasted in *Word* in a "graphics frame." The frame is treated like any character, so you can type to the left or right of it. When a graphic frame is selected, you can resize it by dragging its handles. You have a choice as to whether the resizing also alters the graphic, or just crops it as you shrink the frame.

The Outliner mode is intrinsically uncomfortable — the people at Living Videotext have nothing to fear from this version of Word.

Word also has its own built-in graphics capabilities, although they're nothing like *Works'* Draw function. You can create horizontal lines by a special use of Tabs; vertical lines can be inserted by clicking on the vertical line icon on the ruler—dragging the line marker repositions the line in the selected paragraphs.

For boxes of various sizes and shapes, you can format a framed paragraph but not type anything in it; or, you can use a series of graphics frames sized any way you want.

PAGE LAYOUT

The original *Word* wasn't a total wimp when it came to page design (it had, for instance, gutter margins and odd-even headers/footers for facing pages), but this version leaves it in the dust.

First, of course, there's the improved graphics handling. Next is the fact that you can switch from single to multicolumn mode within a single page. There is also the simple but effective option of defining separate headers or footers for the first

THE FIRST TIP

Let me be the first to offer a tip on using the new *Word*. The method of entering index or table of contents markers is cumbersome to say the least, but you can fix that with a *Tempo* macro.

First, create a Glossary entry for the index marker ".i.", making sure you format it as hidden text, and store it under the name "i". Create another Glossary entry for the hidden-text semicolon that ends an entry, using "e" as its name.

To create the *Tempo* macro, first select a word or phrase in the document that will be marked for indexing, then record the following keystrokes:

- COMMAND X (cut the index item)
- COMMAND-BACKSPACE, i, Return (put the Glossary entry ".i." into the document)
- COMMAND-V (paste the index item back in the document)
- COMMAND-BACKSPACE, e, Return (put the Glossary entry ";" into the document)

Stop the recording, and store the macro under an easy key combination: OPTION-I, for instance. To invoke the macro, select the item you want indexed and press OPTION-I. The playback takes less than 2 seconds, and you'll have your index item surrounded by the correct characters.

A table of contents macro can be created in the same way.

THE WORD ACCORDING TO AKER

page of every section.

Then, there are the more sophisticated techniques, such as assigning negative margin definitions to get margin notes, or margin figures; setting up a header to print in the vertical margin of every page; and, using the Side by Side paragraph format to place graphics and text (or

Word 3.0 is a program of extremes. It bends over backwards to be friendly to the beginner while providing for nearly every wish of the power junkie.

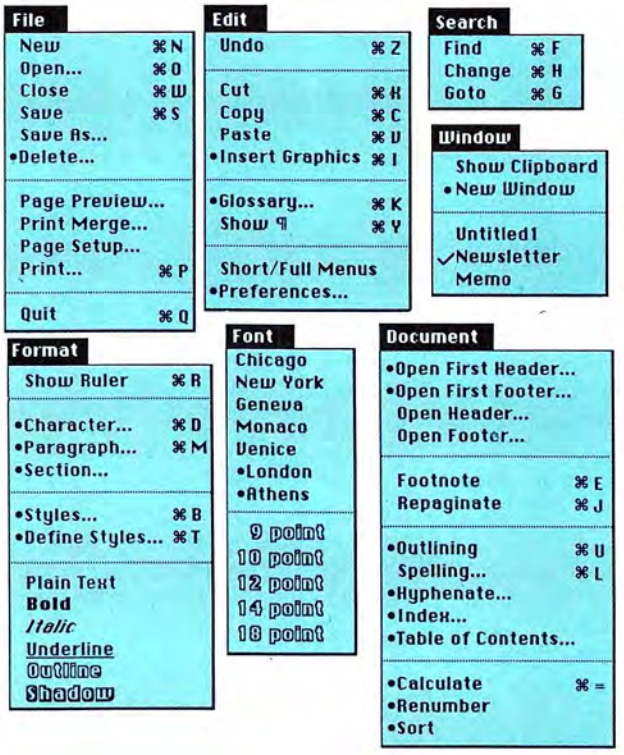
different blocks of text) nearly anywhere on a page in relation to each other. Clever use of the Side by Side format also overcomes the normal multicolumn restriction of columns having to be the same size.

Then, to top it all off, there is Page Preview. In the Preview window, you can take a look at the overall page layout, including headers, footers, page numbers, and formatting that does not show in the document window. You can use the magnifying glass to zoom in on any part of the displayed pages, although you can't edit even in this close-up view.

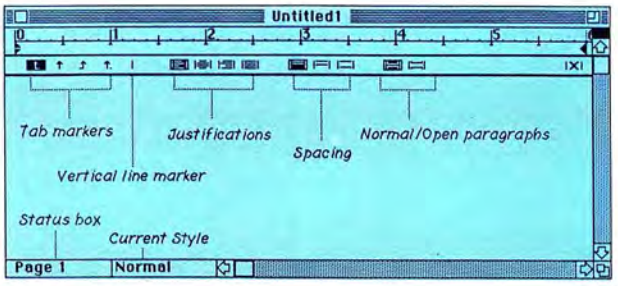
Page Preview provides an easy way to change page margins, move page breaks, and reposition headers, footers and page numbers: all you have to do is click on the margin icon and then drag the lines around on the miniature page.

OUTLINER

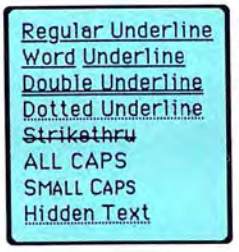
The Outliner mode in *Word* 3.0 is its weak point, unless you believe



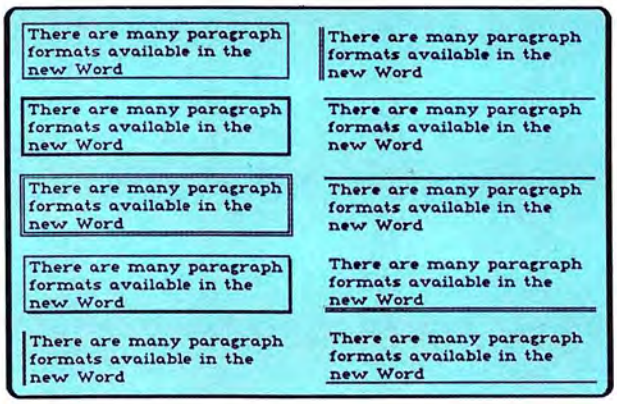
Word's menus: the bulleted items appear only in Full Menus mode. The lower area of the Window menu keeps track of open windows; the New Window command opens a second window for the current document. There is an additional Work menu that appears when you create commands for it.



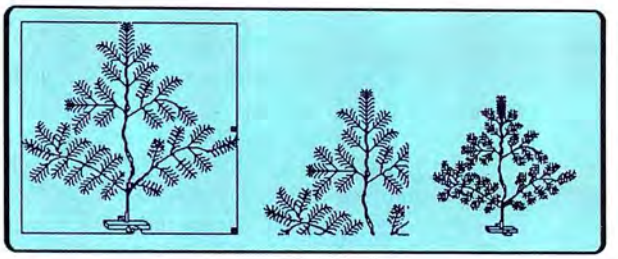
The ruler has various formatting options in Full Menus mode; there are preset tabs every half inch. The X at the right cancels formatting in the current paragraph, returning it to Normal style. The status box gives various information; besides showing the current page number, it is used for entering Glossary names, calling up Styles, displaying calculation results and lots more.



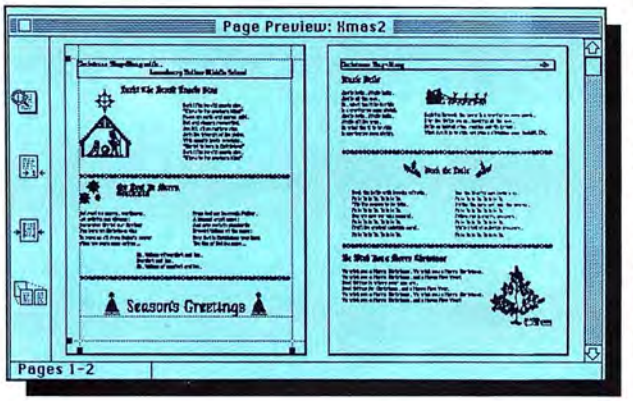
Word goes beyond the standard style options for characters. Hidden text appears with a dotted underline when it is displayed.



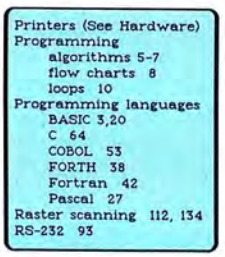
Paragraph formatting includes a variety of frames and lines.



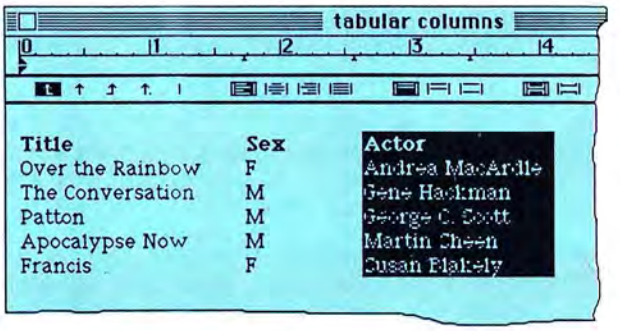
When a graphic frame is resized, it can crop or resize its contents. Each of the smaller graphics is 66% the size of the original; the percentage of shrinkage or expansion is printed in the Status Box as you alter the graphic frame.



Page Preview lets you check your page layout and change some of it. The icons at the left are for zoom view, page numbers, margin adjustments and single/double page display. Here, margins are shown on the first page; the lines can be dragged on the picture to new spots and the document is reformatted accordingly.



Word can compile an index like this for you once you've coded all the entries within the document.



Any rectangular area of a document can be selected; this is useful for column manipulation — selecting a column to be formatted, erased, moved, sorted, or added up.

MAKING WORD YOUR OWN

Word 3.0 gives you the power to format not only characters, paragraphs, and documents, but also to configure the application itself.

You can set default values in the Page Layout box, and change the default "style" that *Word* begins within a new window. Even better is the chance to configure *Word*'s menus the way you want them.

You can add or subtract items in the Format and Font menus; these include not only items available in the formatting dialog boxes, but also items that appear on the rulers. And, if you want to add styles or other major items to a menu, *Word* creates a special Work menu to hold your choices.

All that's missing is the added ability to change the Command key options as well as the menu contents.

that it's the thought that counts.

You can start your work in the Outliner, or move into it after your document's under way. You can work in the Outliner with "titles" that have "body text" associated with them, or just collapse existing paragraphs so only their first lines show. Paragraphs can be assigned a level of indentation from 1 to 9; you can shift paragraphs (collapsed or opened) to the left or right, or up or down, with a press of the cursor key, or a click on an arrow in the Outliner's ruler.

The use of the cursor keys for paragraph shifting is one of the Outliner's many problems; although the numeric keypad moves the cursor, it's confusing to remember the change in cursor controls from the regular text mode.

Another big problem is that shifting a paragraph sometimes moves its subordinate paragraphs with it and sometimes leaves them behind altogether. The paragraphs only travel as a group if the lower ones are "hidden" under the main one. Adding to the confusion is the fact that indentations indicating levels in the Outline mode no longer apply when you switch back to regular mode.

There are too many differences between the Outliner mode and regular mode for a user to be comfortable switching between them; in fact, the Outliner mode is intrinsically uncomfortable. In short, the people at Living Videotext have nothing to fear from this version of *Word*.

POWER PLAYS

Three special features of the new *Word* are its spelling checker, indexing capability and table of contents command.

The checker is not interactive—it's not watching as you type, but you can use it to check a specific selection or an entire document. There is an 80,000-word main dictionary, and you can create additional "user" dictionaries. The speller is smart enough to suggest alternatives for misspelled words that are not always the nearest alphabetic equivalent. So, if you type "hte," the spelling checker will suggest "the;" on the other hand, if you try "picnicing," leaving

out the "k," the suggested replacement is "bicycling."

There are two problems with the speller. First, there's no easy way to enter the "unknown" word into the edit field if you just want to alter a typo—you have to retype the whole thing. And, every occurrence of an unknown word is selected, even if you pressed the "Ignore" button the first time the word came up. *[Editor's Note: Microsoft has informed us that this bug has been fixed.]*

The way *Word* compiles an index or a table of contents for a document is fantastic; the way you have to mark an entry to be included in an index or table is terrible.

An index item has to be preceded by a hidden-text ".i." and ended by a hidden-text semicolon if it's not at the end of a paragraph. Table of contents items are handled similarly. These leading and trailing symbols have to be entered individually, an extremely clumsy operation. But, once you get past the marking of the entries (see the sidebar "The First Tip"), *Word* does both operations beautifully. *[Editor's Note: See Doug's article for the proper historical perspective on these features.]*

INTERFACE

Microsoft made contributions to the Macintosh user interface in the first version of *Word,* but this version goes even further. First, there is total keyboard control for everything: any item in a dialog box can be selected or activated from the keyboard, and you can even pull down and select from menus with the keyboard. Selecting an item in a dialog box involves using command keys to cycle around the box, with each item being momentarily underlined; OPTION-SPACE BAR or COMMAND-SPACE BAR selects that item.

Pressing the period on the keypad, or COMMAND-TAB selects the menu bar, and subsequent key presses (letters, numbers or cursor keys) select menus. The cursor keys then select from the menu that's displayed, with Return activating the selection, or COMMAND-PERIOD closing the menu.

I wouldn't give up my mouse for anything, and it's certainly faster to make multiple selections in a dialog box with a mouse than with the keyboard options; however, a single quick selection from the keyboard can be faster than reaching for the mouse for a menu selection.

Microsoft has also introduced entirely new ways of selecting text in a document. The exciting one is the "free rectangle" selection: with the Option key held down, you can drag and select any rectangular area and proceed to edit as you would any selected text. This is made for easy column manipulation, but you can select a block of text anywhere in the document if you want to. Letters that are only partially selected are included in the selection.

AD INFINITUM...

Word comes with a 140-page tutorial manual and a 400-page reference guide. (Really!) I mention the numbers to show that there's no way a review of this length can describe all of *Word*'s features—never mind how well or how poorly they are implemented. Some of its other features are:

- Alphabetic or numeric sorting (ascending and descending) of selected text: paragraphs, lists, columns. Sorting a column in a tabbed table sorts the rest of the columns along with it.
- The data merge capabilities of the original *Word,* for form letters, mailing labels and so on.
- Easy printing of any size "paper," including mailing labels, including multiple-across mailing labels.
- Linking documents for printing, and for multidocument table of contents and/or indexes. (Page numbers are not automatically adjusted — you still have to set the starting page number for each document.)
- Lines in a document can be numbered, singly or in any increment.
- The contents of the Clipboard can be the replace text in a Search and Replace.
- Calculations can be performed on any selected numbers: addition, subtraction, division and multiplication are supported. The result is displayed in the status box and placed on the Clipboard for quick pasting into the document.
- Specific formats can be searched for, such as the next underlined item.
- A "mathematical typesetting language" is included, as is the special Symbol font, for creation of the most intricate mathematical formulas.
- A Hyphenate command will hyphenate long words in your document so the text will fill the lines more evenly.

That's not all, but those are the highlights.

Word 3.0 isn't perfect, but it is extremely powerful. It can be forgiven some of its lapses, but others are hard to understand: a spelling checker and a hyphenator, but no word counter?

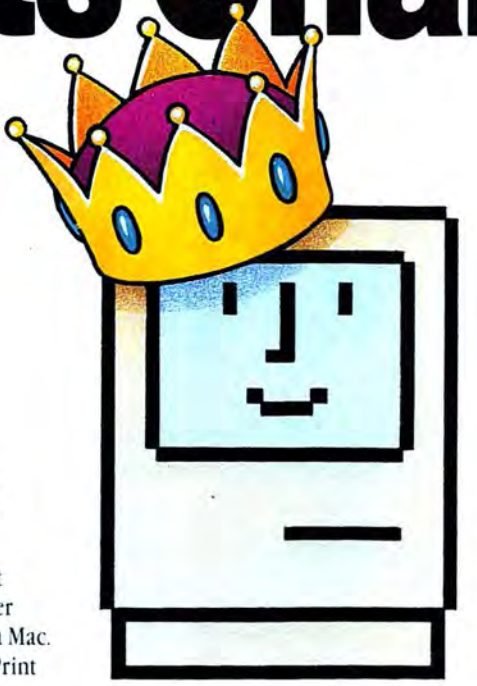
Microsoft had the advantage for a long time of having the only other Mac word processor around — some might say the only word processor, relegating *MacWrite* to the rank of memo processor. Now there's lots of competition, and Microsoft still has an advantage: having the most powerful Mac word processor around.

WORD 3.0

Overall Rating	★★★★
Follows Mac Interface	★★★★
Printed Documentation	★★★★
On-Screen Help	★★★★
Performance	★★★★★
Support	★★★★
Consumer Value	★★★★

Comments: In all, a power user's dream. The documentation goes from explaining the basics to a beginner to a full reference guide, with little in between. The on-screen help is exhaustive, but exhausting to look through. The consumer value rating would be higher if the price were a little lower. **Best Features:** The power options—index, table of contents, configurable menus, menu modes and page layout capabilities. **Worst Feature:** The less-than-intuitive outliner, the awkward method of tagging index and table of contents items, absence of a word count, inability to edit in multicolumn view. **List Price:** $395. Requires 512+, one double and one single drive minimum. Published by Microsoft,16011 NE 36th Way, Redmond, WA 98073. (206) 882-8080. Not copy protected.

Prints Charming



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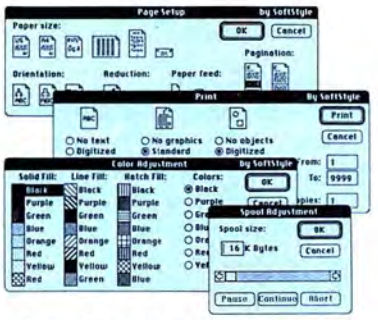

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Love everlasting

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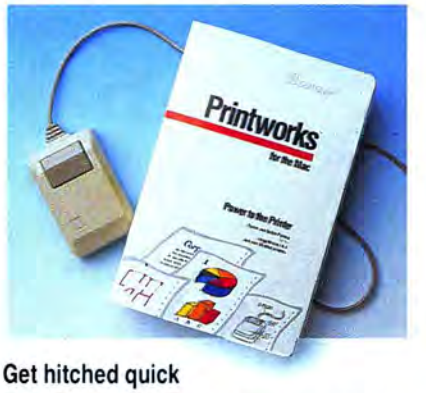

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THE WORD ACCORDING TO CLAPP

BY DOUG CLAPP

GARY HOVLAND

Word 3.0 is clearly the result of events in the IBM world. But in spite of its pedigree, it shines brightly.

"THAT WHICH DOES NOT DEstroy us makes us stronger."

You probably remember that line from Nietzsche's *Also Spracht Zarathustra*. I remember it from a movie: *Conan the Barbarian*.

It also applies to *Microsoft Word* 3.0 — because of a word processor called *WordPerfect*.

A HISTORY LESSON

Here's the story. A long time ago, there was a fairly good word processor called *WordPerfect*. It was created by Satellite Software International, a small company in Orem, Utah — an area not known for super programmers or super word processors, or even software.

Time passes. *WordPerfect* sells some copies. *WordPerfect* users send in their registration cards and requests for new features.

Now the story gets weird. Satellite Software listens to its customers. The company adds the requested features (I told you it gets weird). *WordPerfect* gets better. And better. Satellite Software International becomes "SSI."

Microsoft, meanwhile, releases

Word for the IBM. It's a killer word processor. Slow at times, granted, and odd at times, and quirky in places, but a killer nonetheless.

WordPerfect keeps adding features: spellers, sorting, boxes and lines in text (we're still talking IBM, remember), and keyboard command upon keyboard command upon keyboard command. And speed — *WordPerfect* really rips.

WordPerfect's market share goes up and up and up. Microsoft is in a dogfight. Rumors of wholesale butt-kicking leak out from Microsoft. "If they can do this, why can't we?" "Why aren't we as fast as *WordPerfect?*"

When the next major *Word* revision (*Word* 3.0) appears for the IBM, it, too, has feature upon feature upon feature. And, at last, it's fast — or fast enough, anyway.

Even now you can open the sash on a quiet day and hear the distant booms of software warfare, as Microsoft and SSI lob feature after feature into the marketplace.

So what? So this: *Microsoft Word* 3.0 for Macintosh is *Microsoft Word* for the IBM. What we've got here are the spoils of the *WordPerfect* wars.

Word has a sort feature because — betcha anything — of *WordPerfect*. And so on.

If you like features, are you gonna like *Word* 3.0! *Word* has features like the Amiga has bugs. Thank God Sharon Aker also has a *Word* article in this issue — the thought of cataloging even some of *Word*'s features makes me swoon. But to be brief, let's just say that Command-anything and Command-Shift-anything and Option-anything and Option-Shift-anything all do something. And if that's not enough, there's also Option-drag and Shift-drag to implement yet more strange and handy features.

[My favorite, this hour, is Shift-Repaginate. The Help file describes the command as "Special Repaginate (for font transfers)." I have no idea what that means, and I can't get it to work — I think — but it sounds neat, doesn't it?]

And hyphenation! Typesetters will kill for a word processor that does hyphenation. Now they don't have to.

Or how about this: raw PostScript commands, embedded in text? Anything the LaserWriter can do, you can command from within a document! So much for *Just Text*.

Or how about this: ¼.55 (234.44*34)/2.3? I select the equation, choose CALCULATE from the Document menu (or hit COMMAND-EQUAL SIGN) and voila! The number 3465.85 appears in a status area of the window frame (and on the Clipboard).

About all it won't do is macros. *Excel* does macros, so why doesn't *Word*? Maybe Microsoft wanted to keep *Word* under 300K (which it did, barely). Or maybe I just haven't found the right key sequence yet. I did find the kitchen sink, though; it's OPTION - COMMAND - SHIFT - BACK-SPACE....

WHY IT'S SO FAST

We can kick *Word* 3.0 around for this and that, but we can't kick about the speed — *Word* 3.0 rips.

It rips because of clever programming and common sense: "Gee whiz" stuff and "Why doesn't everybody do it" notions. Here's a sampling:

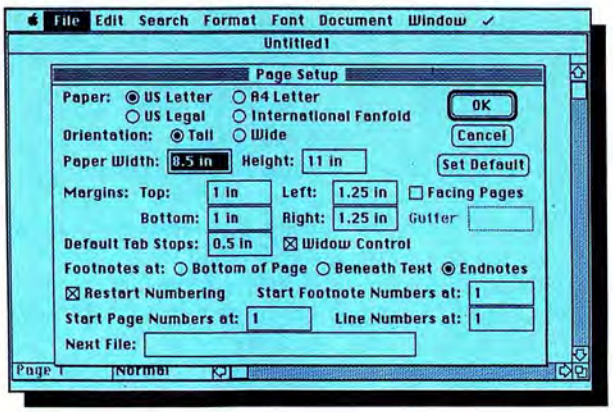
- When most dialogs are called up, the image of the screen under the dialog is saved. When the dialog is closed, the underlying text is instantly replaced, not slowly redrawn. You've seen this impressive "saving the bits" before, whenever a menu disappears.
- *Word* works even when you don't. As you gaze at the screen, *Word* is cleverly formatting the next (or previous) screen in an "off-screen bit-map." One click in the gray area of the scroll bar and — ZAP — instant update. It's so fast that you may not realize you've scrolled! (*Word* gives away its cleverness by a slight flicker of the pointer as it formats.)
- This one's common sense: The Preferences menu lets you keep the *Word* program, your document, or both completely in RAM. Electrons are fast, disk drives are slow. Think of it as a built-in RAM disk. It is.
- And here's one that's not common sense: *Word* 3.0 has something called a "Fast Save" option. It works like this: instead of saving your entire file, only your changes are saved — at the end of the file. In practice, the "new stuff" is minuscule compared to the entire file's length. Needless to say, one Fast Save after another results in a complicated disk file, even for *Word*. When that happens, Fast Save is dimmed and it's saving as usual to clean things up.

THE NEW WORDSTAR

What we have here is *WordStar* for the 80s. In the old days, we used to make fun of *WordStar*'s Control key combinations. Things like ^K^O.A Control key sequence for everything — if you could just remember what it was.

Then there were dot commands. As I remember, when a period was the first character in a paragraph, the character that followed specified what *WordStar* would do from then on; maybe double space, or right justify, or whatever.

Kludgy, huh? But they're back! *Word* 3.0 has dot commands. They



***Word* 3.0's Full Menus option gives you more choices than a menu in a Chinese restaurant.**

THE WORD ACCORDING TO CLAPP

don't call them that, but they're there. One way to make a table of contents is to begin *Word* paragraphs with ".C." — that tells *Word* what to "collect" for a table of contents.

Dot commands. *WordStar*. It's back.

Never mind that *WordStar* had three — count 'em: three! — layers of Help menus. We made fun anyway.

And so with *Word*. It has 73 topics in the Help file! (Unless I counted wrong.) And, of course, you can use COMMAND-QUESTION MARK to create a "question mark pointer." Now click on what you don't understand, and the appropriate Help topic is whisked into view.

But *Word*'ll get jibed at anyway. No matter that there're "Short Menus" for *MacWrite* wimps. No matter that you can even delete menu items, for the ultimate in "don't get nervous" word processors. It'll get picked on.

AND SHOULD, TOO

Why? Because, like all Microsoft *Words*, it's odd and quirky in places. Baffling in other places. Nonstandard at unexpected times.

Charles Simonyi designed it. Simonyi is a genius. A great software designer. The man who's implementing Bill Gate's dictum of "softer software."

Still, when using Full Menus, you'll find dialogs like this:

I don't know about you, but that dialog makes my mind kinda...fuzz out. *USA Today* is better than *Word* 3.0 at focusing our attention. Even Charles Simonyi has bad days, I guess.

And there's also a dollop of arrogance in this *Word*. Granted that we've now got an integrated speller. We wanted it, we've got it. And pagination is now blisteringly fast. Not automatic, which we really wanted, but fast. And Page Preview, the "Show Page"-like feature, is wonderful.

But what about the big two? Showing multiple columns on-screen and wrapping text around graphics? *Word* 3.0 gives both. Sorta.

SAVING WAYS

Word 3.0 offers seven — count 'em, seven — ways to save documents. Or nine, if you count "Fast Save" and "Make Backup." But let's say seven. They are:

- Normal. The unique *Word* 3.0 file, with all formatting intact.
- Text Only. The traditional Macintosh ASCII-only format, with carriage returns signifying paragraphs.
- Text Only with Line Breaks. A new one, sure to be loved by anyone with a modem. An invisible character, called a "Line Feed" is inserted at the end of lines. With line feeds, things look right when uploaded to MCI or other information services. *MicroPhone* also has this handy option, and *Smartcom II* does it when pasting from the Clipboard or when its preferences are set.
- *Word* 1.00 (also *Microsoft Works*). Of course, only formatting offered in *Word* 1.00 (or 1.05) or *Works* will show up on the other end (no dotted underlines and such), but still a great convenience, especially considering the popularity of *Works*.
- *Microsoft Word* (MS-DOS). See above. Pretty much all formatting retained, though I don't think IBM *Word* offers Venice 14.
- *MacWrite*. A humble and smart move on Microsoft's part. *Word* 3.0 also opens *MacWrite* files, without so much as a "*MacWrite* document being converted" message. It just does it. Why anybody would want to, though....
- RTF. For Microsoft, this is the big one. RTF stands for "Rich Text Format." It's a standard invented by Microsoft for use with *Microsoft Windows* on MS-DOS machines. If developers follow the RTF rules, any *Windows* application can read RTF files, with all (or most, anyway) formatting intact, including fonts, styles and sizes. Now where's that IBM AppleTalk card?

Multiple columns on-screen? Sorta. You can only see multiple columns on-screen in Page Preview. It's "look but don't touch." To edit, you've got to close Page Preview first.

Wrapping text around graphics? Again: sorta. How Microsoft does this one is too weird, for me anyway, to explain. Wanna take this one, Sharon?

What's the problem? Other word processors can do it, why can't *Word*? Beats me. It must just be pigheadedness. Or arrogance.

STILL...

Despite the kvetches, it must be said that this is the greatest word processor in the world. Ever. Period. For any computer, small, medium, or big. Period.

The Macintosh is the best computer. *Word* 3.0 is the best word processor. That's all there is to it.

It can do damn near anything. It makes paying an extra $495 for *PageMaker* a silly investment. It makes buying an IBM to crunch words a dumb idea.

It's the fastest, slickest, most powerful text editor ever created. It flies. If you need to pump out words quick, get this one. If you need a text formatter to make documents look just so, get this one. Best of all, if you like to dink around with great programs, get this one. With only a few maddening exceptions, it's a "Word Processor Construction Set."

Word 3.0 is an amazing achievement and a wonderful word processor. It makes me want to write a computer book.

Unfortunately, it's probably going to make lots of people want to write computer books....

DOUG CLAPP IS A WELL-KNOWN MAC RACONTEUR AND A CONTRIBUTING EDITOR OF MACUSER.

WORD 3.0

Overall Rating	4 4 4 4
Follows Mac Interface	4 4 4 4
Printed Documentation	4 4 4 4 4
On-Screen Help	4 4 4 4 4
Performance	4 4 4 4
Support	4 4 4 4
Consumer Value	4 4 4 4

Comments: For now, the ultimate Mac word processor. **Best Feature:** Millions of features. **Worst Feature:** Millions of features. **List Price:** $395. Requires 512+, one double and one single drive minimum. Published by Microsoft,16011 NE 36th Way, Redmond, WA 98073. (206) 882-8080. Not copy protected.

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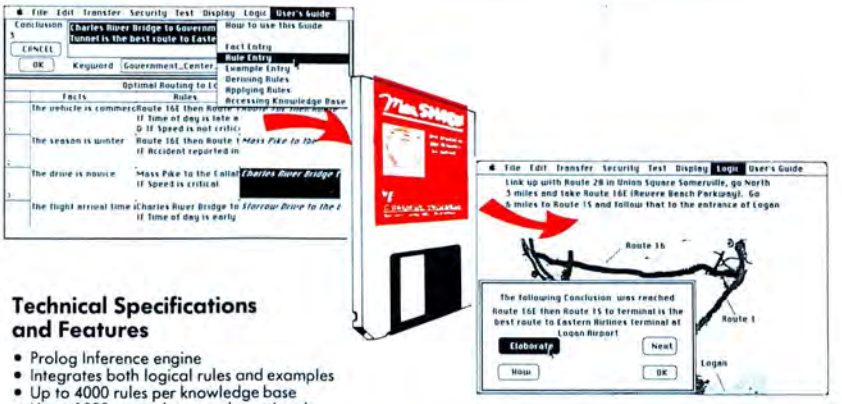

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IT'S HERE-WRITE NOW

A built-in spelling checker and a slew of power features makes WriteNow a worthy replacement for MacWrite as the Mac's basic word processor.

WRITENOW FOR MACINTOSH, THE word processor that wants to replace *MacWrite,* has traveled one of the more interesting roads to market. The name on its box is T/Maker Company, but *WriteNow* is actually the property of NeXT Corp. As you may know, NeXT is the employer of Steven Jobs, who had a thing or two to do with the Mac. However, neither NeXT nor Jobs had too much to do with the development of *Write Now.* This was done by a triumvirate of programmers for a small independent company that was acquired by NeXT, largely on the strength of this program. Due to their previous Mac experience, T/Maker was given the task of bringing *WriteNow* to market. (I know that you don't read *MacUser* just to be kept abreast of such corporate machinations. But bear with me.)

Given that NeXT acquired a company to obtain the rights to this program, the question becomes: Does *WriteNow* warrant this sort of diversion of attention and capital? The answer is yes.

WriteNow, a general-purpose word processor suitable for any size Mac, combines a full set of text manipulation functions with a variety of power features, such as a built-in spelling checker and simple but adequate page layout capability. Although *WriteNow* may not be everyone's idea of a perfect word processor, it is a highly competent, powerful, easy-to-use writing tool which could lead you to reevaluate the program you are currently using.

BY CARLOS DOMINGO MARTINEZ

OFF TO THE WRITE START

The first order of business is to make back-ups of *WriteNow*'s original disks. Since the program is not copy protected, simply drag to a new disk in the *Finder.*

WriteNow is optimized for use with the current *System* 3.2 and *Finder* 5.3 installed on the program disks. T/Maker recommends using only these or later versions of the *System* and *Finder,* especially for Mac Plus and 512E Macs with the new ROMs. Original 128K machines are exceptions. If you are still operating a "thin" Mac, use an older *System* (2.0) and *Finder* 4.1.

GETTING WRITE TO IT

When you launch *WriteNow,* you get a Document window where you can begin entering text (which is strictly WYSIWYG). Document windows look into a portion of the Page View. Vertical and horizontal scroll bars move you through the document. *WriteNow* moves quickly and smoothly through a full range of text entry and editing functions. *WriteNow* also supports any number of open documents up to the limits of available memory.

RULERS AND SUBJECTS

Basic formatting is done with the ruler stretching across the top of the screen, which only exposes its controls when you click on it. You can specify margins, any number of left, center and right tabs, text justification as desired and fine tune line spacing from 1 to 99 points.

The main organizational component of a *WriteNow* document is the paragraph, defined as any characters followed by a carriage return. When a ruler is called, the specified settings are linked with the active paragraph — the one where the cursor is currently resting. You can format the document as a whole, or each paragraph can be formatted individually.

HEADERS, FOOTERS AND FOOTNOTES

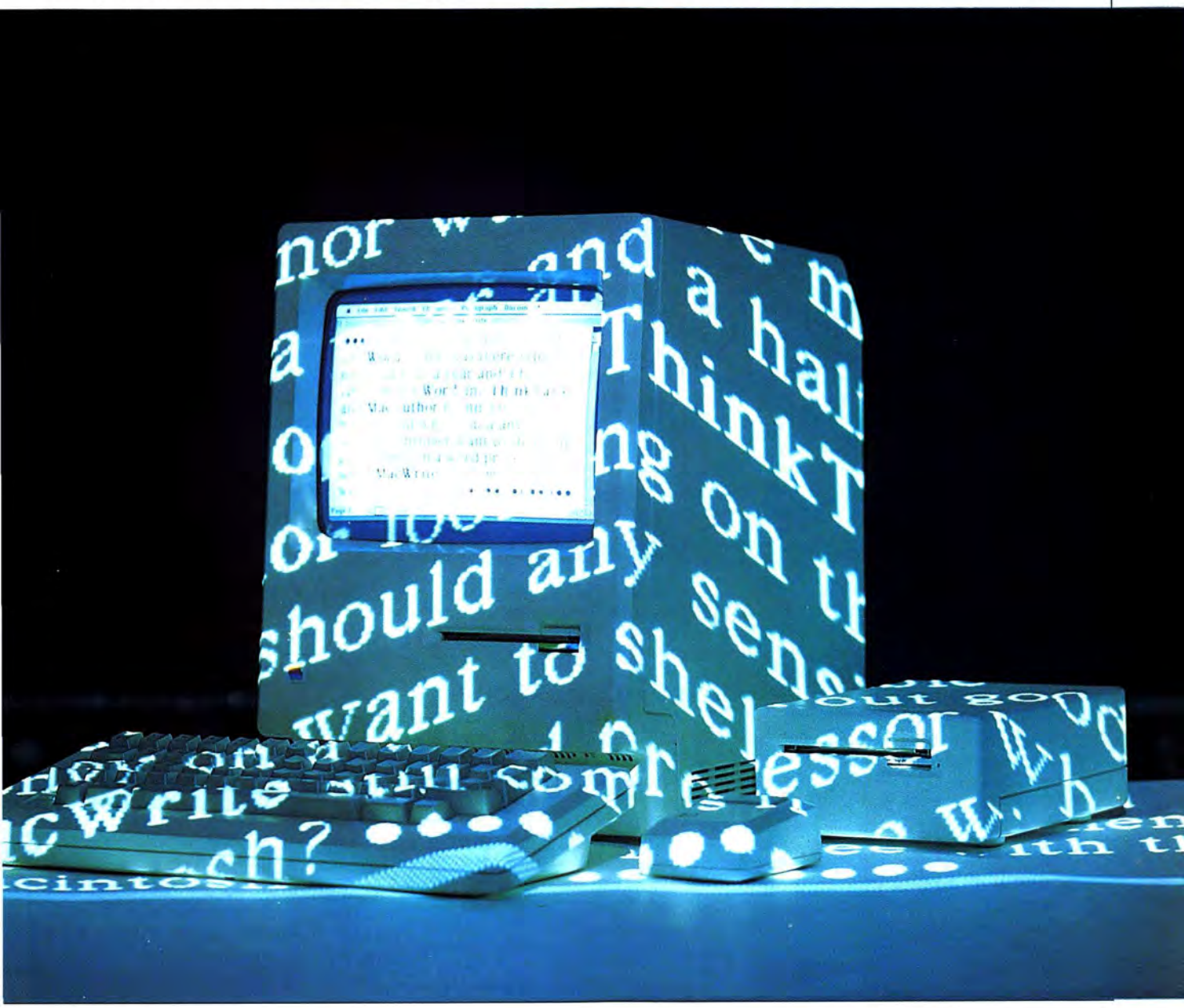
Only the body of the manuscript may be edited within document windows headers, footers and footnotes

must be entered, edited and formatted in their respective windows. You can insert them anywhere in the document by clicking on that location and choosing the proper selection from the Format menu.

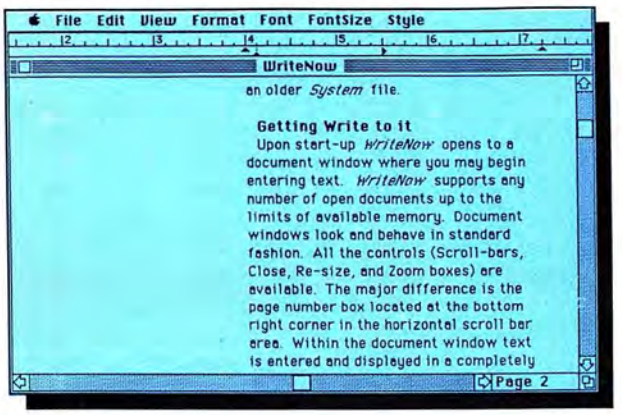
WriteNow lets you specify more than one header or footer in a document, and to restrict their appearance on either odd or even numbered pages. Footnotes appear in their own area at the bottom of the page above the footer region. (If the body of the footnote is larger than the space provided, its contents will spill over to the next page, although, in common with all Mac word processors, very long footnotes are usually handled awkwardly. It's perfectly possible to have a one-word spillover.) Options in the View menu brings Header/Footer and Footnote windows to the sceen for editing.

WriteNow places an identifying icon anywhere you have a header, footer or footnote. Using Page Breaks, Keep Paragraphs on the Same Page commands, inserting dates, time and page numbers, and hyphenation commands also generate markers. The markers for date, time, and page number cause these features to be displayed and printed wherever they are placed. The Show Markers command in the View menu will show you everywhere a marker has been inserted in the text.

Show/Hide Spaces performs the same function for all the nonprinting characters. Carriage returns, tabs, space bar inputs, page break characters, as well as the delineation of the header and footer regions, the rectangle denoting the size of the page, and characters preventing the break-



IT'S HERE—WRITENOW



WriteNow's Document window with the text of this article displayed. Hidden beneath the window at the top of the screen is the formatting ruler. Although the ruler is not active, the margin settings are still visible for reference.

WriteNow's Header/Footer View shows two windows. At the top is a footer intended to display the page number. Beneath it is a new window waiting for another footer to be entered. WriteNow allows multiple headers and footers. View Spaces has been turned on to aid formatting.

up of paragraphs are all made visible by this option.

WRITE WHERE YOU WANT THEM

MacPaint images and those in *MacDraw's* PICT format can be incorporated into *WriteNow* documents. Images can be pasted directly at the current insertion point, allowing you to embed the graphic within the text. The only exceptions are pictures which are larger than the current "page wrap factor" as specified in the Page Setup dialog box. *WriteNow* treats such "tall" images as distinct paragraphs. However, changing the page wrap factor will permit you to fully integrate tall pictures as well.

Images can be positioned within a document by inserting returns, spaces or tabs, and by changing the settings of margins, line spacing or alignment boxes on the ruler. Very fine positioning, shifting the image one point at a time, is possible with the Sub and Superscript commands. *WriteNow* can also alter the scaling of the picture once it has been pasted into a document. Double-clicking selects the image and outlines it. Dragging diagonally to the left changes the size of the image. Do this while using the option key and it will have the effect of altering the proportions of the picture.

WriteNow's Undo command is implemented in an exceptionally comprehensive manner: almost every action may be reversed with Undo. Depending on your last action, the menu choice changes to reflect the operation which may be performed. Also, every Undo itself may be reversed. Immediately after an undo operation, the menu item changes to a Redo command. In those rare cases where your last action is irreversible, a Can't Undo status is displayed instead.

SAVING GRACES

WriteNow even carries this capability to your disk file. When you have made changes to your file but not saved them, the Revert To Saved command will restore the text to its state at the time of the last Save operation. After you have committed your changes to disk, you may still restore your text to its previously saved state by choosing Revert To Backup. *WriteNow* retains a copy of the version just prior to your last changes. If you inadvertently choose either of these options, the Undo command will reverse them as well.

Although *WriteNow* maintains two copies of your work in the disk file, it does not consume twice the storage space. By sharing the common text between the two copies and merely keeping track of the changes, *WriteNow* provides this insurance while taking up the least possible disk space.

After you've finished a work session, *WriteNow* compacts the data on the disk, reclaiming unused space. This cuts down on fragmenta-

A DISSENTING VIEW

WriteNow is a fine program. I've used it extensively over the last few weeks, and while I can appreciate its power and features, I think I'll stick to *MacWrite* right now (gad, this program is going to set off a slew of bad puns). I'd rate *WriteNow* a 3½-, maybe 4-mouse program. No more. Why?

Well, I'm primarily an editor and writer and I also do a lot of telecommunications. I don't do multicolumn work and graphics embedded in documents are simply a nuisance to me. I need the ability to generate text files and move between formats (we get articles written on everything imaginable—including *PageMaker*). We send our own coded (text) files to our typesetter. *WriteNow's* inability to generate text files from within itself is a fatal flaw for me.

The basic concept of a *Translator* is good—it allows an easy way to keep the program fairly current, but it has to better integrate into the main program than this one.

My other major need is a world-class spelling checker. *WriteNow's* checker is OK, but it doesn't begin to stand up to *Thunder!*, *Spellswell* or *MacLightning*.

MacWrite, with *Thunder!* running automatically every time *MacWrite* is launched, fills all my editorial needs. If there's a lesson to be learned here, it's that you should pick your word processor based on what *you* are going to be doing with it, not on its feature list.—*SB*

tion of your files and optimizes the management of disk resources. If you try to close a document without saving the most recent changes, *Write Now* will call this to your attention. At that time you may explicitly choose Save/Compact to clean up your file. However, be advised that this operation deletes the backup copy normally available to the Revert commands.

SEEK AND YOU SHALL FIND

Like most full-featured word processors, *WriteNow* is able to search for, and replace, strings of text. The Find/Replace command triggers a dialog box from which the search may be conducted. This dialog box may be moved about the screen and left on desktop to be activated as needed. A checkmark next to the command on the menu reminds you that the command has been deployed.

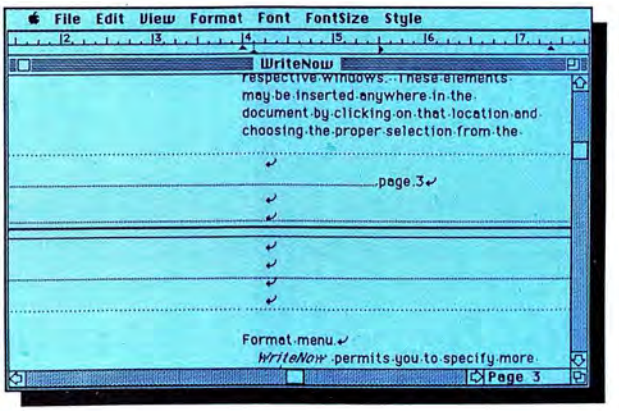
Find/Replace will search for text strings of up to 255 characters, moving either forward or backwards through the text. Unless the "whole word" option is specified, it will match sequences wherever they are found. You can also match characters in either upper or lower case.

SPELL IT WRITE

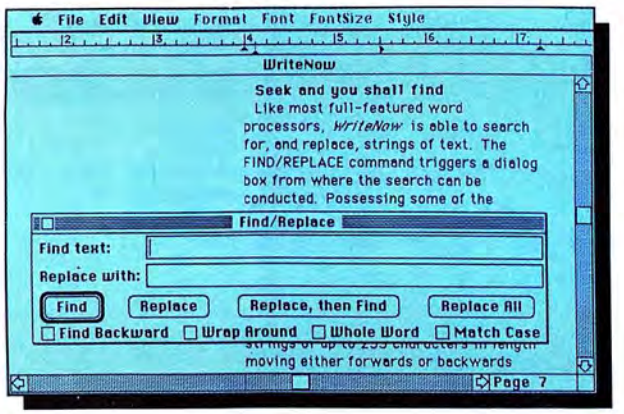
WriteNow's spelling checker has a 50,000-word dictionary. The Check Spelling command opens a combination window/dialog box that can remain on the desktop for ready reference. Find begins searches from the point of the cursor. Guess will give you the program's suggestions for proper spelling. Clicking on the suggested correction substitutes it for the misspelled word in the text. Ignore bypasses a word, Learn adds it to the dictionary, and Forget deletes it.

Separate customized dictionaries can be maintained under different names. If you decide to do this, be sure that you duplicate the *WriteNow* dictionary before customizing the renamed file. Any dictionary can be loaded directly into memory from a separate floppy, conserving space on your work disk. Due to the memory constraints imposed by 128K Macs, the Check Spelling op-

Rulers may be used to format each paragraph individually. Pulling down the ruler highlights the paragraph to be formatted.



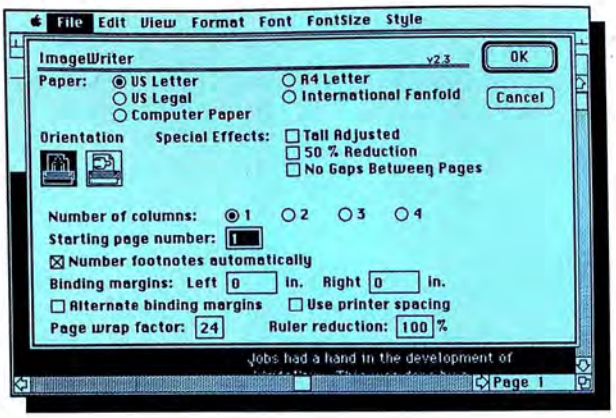
A *WriteNow* Page View with Show Spaces on. Header and footer areas are marked as well. If Markers were showing, the number 3 would be a number sign instead.



The combination window/dialog box enabled by the Find/Replace command, may be moved anywhere on the screen. Buttons control search operations.

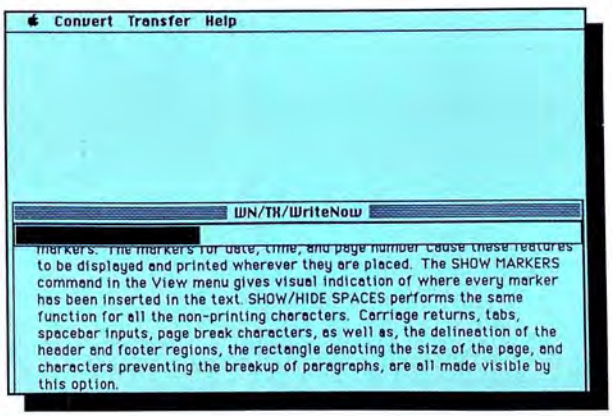
***WriteNow* has a built-in spelling checker. Window/dialog combinations like this may remain on the desktop while you edit.**

IT'S HERE—WRITENOW



The Page Setup dialog box offers extensive layout capabilities for a word processor.

When text is organized into columns, the header region may be used to create headlines.



The *Translator* utility, shown converting a text file into a *WriteNow* document, is the program's connection to the outside world. As a separate program, *Translator* is capable of launching *WriteNow* after converting a file.

tion is considerably slower on those machines.

PAGE LAYOUT

The Page Setup... gives you an exceptional degree of control over how your document will look on the printed page. First of all, you can alter the scaling of the ruler. Ruler Reduction is used to reduce or enlarge your document to match the dimensions of the paper on which it will be printed.

Page Setup... also allows you to shift the body of the document to either side to allow for binding. Binding margins can be alternated for printing on both sides of a page. And if your Mac has the 128K ROMs, *WriteNow* gives you the option of variable spacing between characters.

WriteNow also gives you control over the page wrap factor, the point size of the largest element (text or graphics) that will wrap from one page to the next. If an element larger than the specified factor is included in a paragraph that falls across a page break, *WriteNow* will automatically reformat to keep that paragraph on a single page.

And finally, *WriteNow* lets you set up—and see on screen —as many as four columns per page. Essentially the program scales down the dimensions of a full page to fit the dimensions of the columns. The ruler settings within each column remain the same and the body of text flows from one column to the next. Graphics embedded in the text may have to be resized to sit properly within columns, and spacing between columns will vary according to the margins set for the paragraphs.

Headers or footers, however, do not conform to the columns. These, unlike footnotes, will continue to stretch across the page regardless of how it is set up. Although at first glance this may appear to be a drawback, it's actually a page layout bonus. Since columnization shrinks the scale of the ruler settings, text headings cannot be retained as headlines in multicolumn documents. However, the header region may be utilized to create banners across more than one column.

For best results, Page Setup options should be selected before formatting the document with the ruler. Although either sequence is acceptable, doing the page setup first preserves the dimensional integrity of the ruler on the screen.

Despite these many features, *Write Now* only approximates true page layout. If you must regularly lay out complex documents most of these can be done better with a bona fide page layout program. But for simpler documents, *WriteNow* gives you layout control that is unprecedented in a word processor.

PRINTING WHILE YOU WORK

Printing is the other side of the WYSIWYG equation and, whether you print to an ImageWriter or a LaserWriter, what you get is a precise reproduction of what you see on your screen.

If you're using an ImageWriter, *WriteNow* can print your document "in the background." If Tall Adjusted is selected with all other options at their normal setting in the Page Setup dialog, and medium quality (Faster) is chosen you can continue editing or writing as a document is

printing. Naturally, the printing speed is slower; the program pauses every half page to transfer data to the printer. But this "quasi-multitasking" can come in handy.

WRITE AGAIN?

With your first word processor, editing and writing power is probably your most important consideration. But after you've collected even a few disks full of documents, a program's ability to utilize those files can overshadow everything else.

WriteNow's Translator utility will convert documents saved in *MacWrite* or *Word* format into files that *WriteNow* can access. However, there is no way to make formatted *WriteNow* files accessible to any other word processor, except by the text file translation route. Although the *Translator* reconstructs converted files as closely as possible to their original form, various exceptions are listed in the *WriteNow* manual in Appendix A. *Translator* is speedy and works well, giving a graphic indication of the conversion. When the process is finished, you may Quit to the Finder or use the Transfer command to launch *WriteNow* and open the converted file into a Document window. Unfortunately, the *Translator* cannot be accessed from within *WriteNow;* it is a separate program. If you want to use an alien file, the Translator must convert it before entering *WriteNow.*

WRITE FROM THE START

WriteNow's supporting documents serve their function well. Nicely conceived and smartly executed, the 175-page, spiral-bound manual is the logical place to begin your relationship with the program.

The manual leads off with an introductory discussion of the proper System files and the management of disk resources. There's also a step-by-step tutorial which will painlessly bring you up to speed. Other chapters discuss each menu option and keyboard command as well as troubleshooting potential problems. Two appendices, one detailing the particulars of *Translator* file conversions and the second summarizing the special features of the program, plus a Glossary and an Index, bring up the rear.

No on-line help is provided. But locating information in this manual is easy enough that you won't miss it. As with most Macintosh documents, the emphasis is on the novice than the experienced user, so some of the complexities get shortchanged a little bit. For example, a more thorough explanation of *Write Now's* columnization feature, with some examples on how to best utilize it, could have been added. But, on balance, the manual is excellent.

WRITE AND WRONG

Even when a program has as much going for it as *WriteNow,* there are always things that could be improved.

The first and most obvious is the *Translator.* Continually having to exit the program to make a file conversion could become annoying. Naturally the trick is to make the translations beforehand, but this is not always possible. If spell checking functions can be accessed from within the program, why not the importation and exportation of data?

Also, I was disappointed to discover that the cursor keys on my Mac Plus were still useless. I confess that the more I work on the Mac, the more accustomed I have become to reaching for the mouse. But for many operations keyboard cursor movements would be simpler and more elegant. As a second generation word processor for the Mac, *WriteNow* should support cursor key use.

Another disappointment is that *WriteNow* retains one of my least favorite features of the Mac system. If, like me, you are a little paranoid about your disk files, you might like to frequently save your text to two separate disks. This is how I trained myself to behave when the Mac was but a gleam in Steve Jobs' eye. However, if you wish to back up your Saves to another disk most programs, and unfortunately *Write Now* is no exception, make you swap disks a dozen times. A megabyte of memory in my Mac Plus and I need 13 swaps to back up a 30K file. Sure, I make frequent saves and then copy from one disk to another in the *Finder.* But I know that if a disk is ever chewed up, a day's work could go up in smoke. I would surely rest easier if I could backup to two disks efficiently from within a Mac word processor. Maybe someday.

WRITE TO THE POINT

At the outset I intimated that *WriteNow* does not represent my idea of the perfect word processor. Perfection, of course, is an elusive thing and anyone who writes extensively is going to have very definite (and often idiosyncratic) ideas about what a program should do and how it should do it.

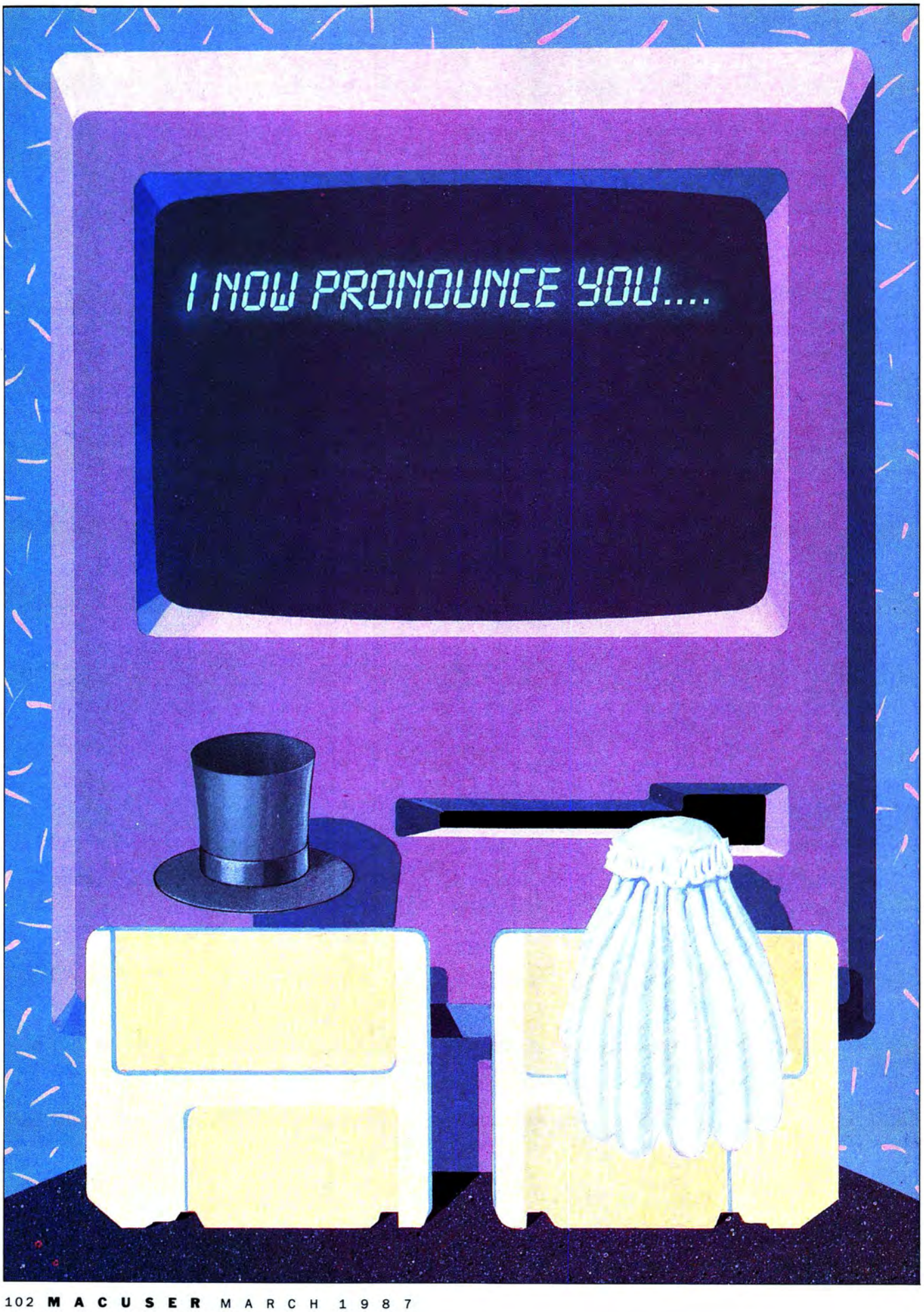
However, *WriteNow* presents a highly capable and versatile writing environment. Coded in assembly language, the program performs crisply. Its many features do not burden it with excess baggage nor the user with needless complexity. According to T/Maker, *WriteNow* was three years in development; the time and effort were well spent. Everything works as expected and nothing surfaces to surprise the unwary. The finished product is simply solid. After working with it for several weeks, I doubt I will very often return to *MacWrite.*

CARLOS DOMINGO MARTINEZ IS A FREELANCE WRITER FROM QUEENS, NY.

WRITENOW

Overall Rating	★★★★½
Follows Mac Interface	★★★★★
Documentation	★★★★★
On-Screen Help	None
Performance	★★★★★
Support	★★★★★
Consumer Value	★★★★★

Comments: An excellent word processor with built-in spell check and simple page layout capability. **Best Feature:** Crisp, clean, operation and ease of use. **Worst Feature:** File translator is separate from main program. **List Price:** $175. Runs on any Mac. Published by T/Maker Company, 1973 Landings Drive, Mountain View, CA 94043. (415) 962-0195. Not copy protected.



MORGAN PICKARD

A MARRIAGE OF CONVENIENCE

Join MacInTax to either MacMoney or Dollars & Sense and make short work of your taxes — even on the long form.

BY SCOTT BEAMER

ONE DAY IN THE NOT-TOO-DISTANT future Jan and Jim Smithwick will have their employers transmit their salaries electronically directly into their personal bank accounts. They will be able to download their bank records into their personal financial software. That program can then pass the information to a tax preparation program.

Jan and Jim will then send the electronic version of their tax return to their accountant via modem and the accountant can electronically file the tax return with the I.R.S. All of this will be accomplished without the Smithwick's having to re-enter any data, without the use of a pocket calculator, and without the necessity of any paper.

Does this sound too pie in the sky? A few Mac users will probably use exactly this electronic path to file their 1987 taxes (still a year away). But even now, thousands of Mac users use a portion of this path in handling their personal finances. All of these options are available now to a certain extent, and most of us will gradually increase the number of electronic links that we use in our daily lives.

GETTING TOGETHER

Perhaps the most valuable electronic link this tax season will be between a home accounting program and a tax preparation program. If you used your Mac to keep track of finances last year (and you should have), you may be able to transfer much of your personal information directly onto your tax forms in *MacInTax,* using an interface *MacInTax* expects to include in this year's package. The option will certainly be available for 1987 tax preparation.

SoftView, the company that publishes *MacInTax,* has for some time expressed an interest in providing this type of link for their customers — with mixed success until recently. Then Survivor Software's *MacMoney* became the first personal financial management program on the Mac to save report files as ASCII text. Before this, it seemed that the home accounting software companies felt they could compel customer loyalty by making it necessary to rekey all your data files if you wanted to switch to a competitor's program. Fortunately, that kind of thinking seems to be going the way of copy protection and the 128K Mac.

Survivor Software contacted SoftView about the feasibility of an electronic link between their programs. And now, as a result, *MacInTax* (for 1986) already includes an interface that will allow it to open ASCII text files as a separate window from within *MacInTax.* You can select data in the window, then point to where you want the data entered in the tax forms, permitting the quick transfer of information from *MacMoney* to *MacInTax.*

SoftView contacted many other companies with financial management software for the Mac, and some of them also will be able to use this new link. Most notable among them is *Dollars & Sense.* Although *Dollars & Sense* files can't be saved as ASCII text, they can be used after being run through a special converter that will be included with the *MacInTax* disk.

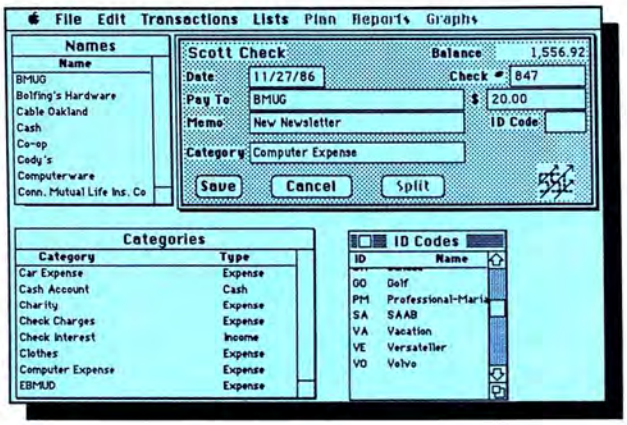
Next year, several companies expect to have new versions of their products that will invisibly tag files. In this way data from the year end report can be transferred automatically to *MacInTax*

TAX PREPARATION

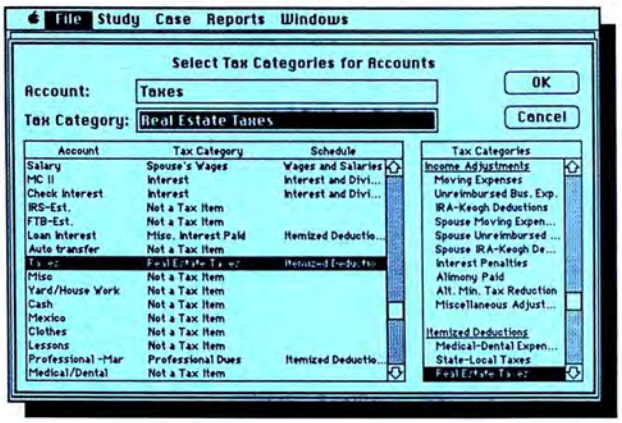
MacInTax is the tax preparation program of choice. It works extremely well and customer satisfaction is very high. The only significant customer complaint is that SoftView has been very late issuing the updated versions of their program the past 2 years. SoftView is aware of this problem and has made it a priority not to let it happen this year.

By now, the new version of the product should be out with a variety of ways to relieve you of the drudg-

A MARRIAGE OF CONVENIENCE



***MacMoney* data entry. Just type the first letter of the payee's name. The names list scrolls to that letter. Click on payee and it appears in the data entry form along with the linked category.**



***Forecast* interface with *Dollars & Sense* file. The *MacInTax* interface with text files will work in much the same way.**

ery of keying in data. If you used *MacInTax* to prepare last year's taxes, the program will update your previous forms so they can be read by this year's application. It will also automatically fill out as much information as possible on this year's forms from the previous year's, such as name, social security number, number of dependents, capital loss carry over, income averaging information and depreciation.

If you kept track of your personal finances in 1986 with a home accounting program, *MacInTax*'s new interface may further reduce the need to key in data by hand. You will have to select the previous year's data and identify where you want it to go in this year's form, but that should be significantly less work than manual data entry. Whole lists of items and numbers can be transferred at once using one of *MacInTax*'s itemization windows.

Itemization windows are one of the best features in *MacInTax*. Most lines on the tax forms can be itemized in windows. The results can be printed out and filed with your return. The itemizations can be several layers deep. Itemization windows also offer a useful place to leave notes to remind you of why you did something in a particular manner.

Sometime during the summer of 1987, SoftView plans to release a professional version of *MacInTax*. There will be a dual data entry mode, allowing the preparer to choose between the *MacInTax* type screen or an accountant's worksheet. This will let the preparer consider alternate tax strategies simultaneously. The client data base will be cross linked, allowing the extraction of information across files.

The reason this package is of interest to ordinary taxpayers is that its existence will increase the likelihood that your accountant will be able to file your tax returns for 1987 electronically. Right now, the I.R.S. has this system available only in certain pilot cities. The list of cities is growing, but only professional preparers are allowed to file returns in this way. If the option does become available for your area, it should speed up the refund process on 1987 returns.

To take best advantage of this forthcoming revolution, you'll need to have kept your books on your Mac. Let's briefly examine two of the best programs for that purpose.

MACMONEY

MacMoney is an excellent home accounting program. It has a full list of features with fast, easy and intuitive data entry and advanced data manipulation capabilities. Its report generating ability is easily the strongest available. *MacMoney* is also among the least expensive personal finance programs.

MacMoney has a few drawbacks, including its size: it is so large that it is slow to open and *MacMoney* files take up a lot of disk space. Its report generating menu is so complex that it will take several tries to learn to print out a decent report. Fortunately you can save a customized report as a template.

The manual for *MacMoney* is very good and has an excellent description of how to organize your account categories to facilitate filling out your income taxes. This works well whether you prepare your taxes by hand or with tax preparation software.

There is an extra ID code attached to every transaction that can be used to tag an item for a specific page of the tax return. The tag can be added as you enter data or later — even at tax time — or both. This will allow you to have a list of all the information for a specific page of a tax return on hand and already organized while filling out the actual forms.

DOLLARS & SENSE

Dollars & Sense is the best selling personal finance management program for every type of microcomputer. One of its best features is its ability to link with other Monogram products, though these products cannot yet share files among different types of computers. Monogram's product line includes *Forecast,* a tax planner; *Moneyline,* allowing a computer link between *Dollars & Sense* files and your bank's electronic files;

and *Business Sense,* a professional accounting package.

Forecast is a standalone planning tool that can be used to assist you in tax preparation. It will not fill out your tax forms. As a tax planning aid, it will allow you to look at up to five scenarios simultaneously. You can also look at your financial picture up to 5 years in the future.

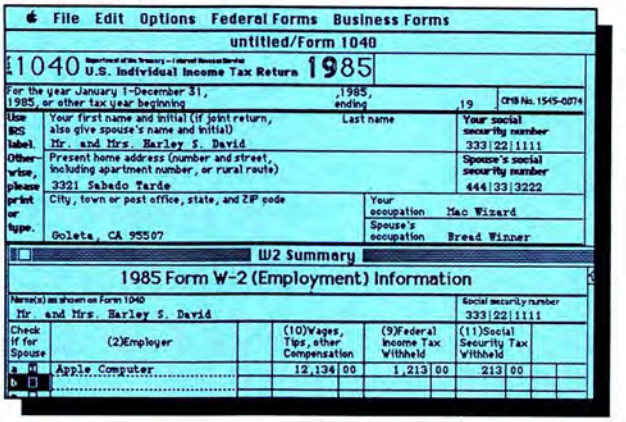
Forecast will allow you to select items from a *Dollars & Sense* data base to fill in amounts on your *Forecast* version of your tax forms. If at some point in the year you wish to see what your projected taxes will be, *Forecast* can look at less than a full year's *Dollar & Sense* data and automatically extend the current figures to the expected full year amounts. The new version containing the 1987 and 1988 tax code revisions should be available by the time you read this.

Moneyline allows you to communicate directly with your bank's computer system. Many transactions can be directly fed by the bank's computer into *Dollars & Sense* accounts. This reduces the drudgery of retyping data, increases accuracy and gives convenient access to bank information at any time, not just when the statement arrives.

This is a powerful example of how easily information can be transferred between dissimilar computers, let alone dissimilar programs. The service is currently available only through Citibank, on the east coast. It is expected that it will become available through Bank of America on the west coast around mid-year.

Business Sense is a professional accounting package. If you decide at some point that it is time to move up from a personal accounting package to a professional program, you can take data directly from *Dollars & Sense* to *Business Sense*. Or you can use *Dollars & Sense* at home for personal financial management and *Business Sense* at the office, and move data back and forth as appropriate.

Monogram expects to have version 2.0 of *Dollars & Sense,* a major rewrite, done sometime this year. It should remedy some of the program's drawbacks and add new features. Relevant here is that version 2.0 will have the accounts data base tagged to allow automatic file transfer to *MacInTax*.



***MacInTax* 1040 with W-2 worksheet showing. Enter the W-2 data in the worksheet and the data will be entered in all the appropriate places on the forms.**

MacInTax (for 1986) already includes an interface that will allow it to open ASCII text files, permitting the quick transfer of information from MacMoney to MacInTax.

HOW TO GET STARTED

If this article has been at all interesting to you, start using a home accounting program now — don't wait for newer software to come out. Now is the time to begin entering personal financial data on a regular basis and you can always upgrade when new versions are released.

The biggest problem the novice faces in getting started is how to organize account categories. Don't worry about it. Use the plain vanilla list of categories from the manual (*Dollars & Sense* has a set of accounts built in.) If you want to be more organized before you start, look at a few months of canceled checks and credit card receipts. You can add to the list as you go along, but once you have created a category you can't remove it, even if you remove all the entries in it. You can only remove it when you begin a new year, and then only if it is empty.

The first few times you use a home accounting program, keep a notepad nearby. When you don't know which category to put something in, put it in "Misc." and make a note of where you think it might fit. That way, at the end of the session, you can see if your statement balances, then close the files and add new categories if needed. It is easy to edit your data later and move it into a new category.

Remember above all, BACK UP YOUR FILES! I actually use a three-disk backup system ever since a bad experience in which I lost 5 months data. I always work on my master data disk and alternate backing up from one disk to another. Once my files were damaged but they hung up only in certain situations. I didn't learn of the problem until after I had made a backup. The backup was a perfect replica of the master: they both hung in the same way.

It helps to have a couple of months of entries up on the screen when you are entering transactions. This way, you can look back and see how you entered something like an ATM transaction the last time. Being consistent with data entry is extremely important. You won't be able to sort your files accurately if you aren't consistent.

Little errors pop up frequently. If an error is major, say for instance you entered a deposit as a withdrawal or vice versa, the account won't

A MARRIAGE OF CONVENIENCE

balance and you'll know about it right away. Whenever your accounts don't balance, be careful not to save the unbalanced version over last month's balanced version. Save it to a new disk and mark it as the unbalanced one. By going back over it again at a later session you can often find the error and avoid having to re-enter the data. If you absolutely can't make the thing balance, you can at least use your backup to start over from the previous month when the thing did balance. Then you will only have to re-enter 1 month's data to get things right.

Grooming your files at the end of the year is a must. If your accounts balance at the end of the year, you are in pretty good shape but transactions can still be in the wrong categories. At tax time it is necessary to review all transactions one by one, making sure that each is in the correct category and correctly marked as taxable or nontaxable. It is best to empty out the "Misc." and "Cash" accounts as much as possible.

Hopefully, before tax time rolls around you will have been practicing with report templates all year. This is the most difficult part of using these programs, especially with *MacMoney*, because there are so many variables to deal with. You must make a year end report that will correctly summarize the tax data from your files. If you have been using the suggested tax accounts from the program, this shouldn't be too hard.

When it is time to prepare your taxes, open *MacInTax* and have it fill in the information from last year's forms automatically. Then open the interface window with the text file of your year end financial report. Move the data from the text file into the correct locations on the tax forms and your returns should be pretty well filled out.

A word of warning when you prepare your taxes with your Mac: don't take the machine's word for it — the I.R.S. won't. Your most valuable tool at this point is last year's tax return. If the I.R.S. hasn't complained about last year's taxes then you probably want this year's to look as much like last year's as possible. Every line with data on it in last year's form should have an entry this year, and vice versa, or you'd better know why it doesn't.

Before printing out a final version, take a few extra moments and have your accountant go over the forms with you. Go over any major changes from last year to this, and any significant changes in your fiscal life. This is also a good time to review the categories you use to keep records in your home accounting program.

The first few times you use a home accounting program, keep a notepad nearby. When you don't know which category to put something in, put it in "Misc."

It is much easier to print out the entire form than trying to line up an actual I.R.S. form in the printer. If you do use the latter technique, make sure you have plenty of extra forms on hand, and be very careful that the entries are going on the correct line. It is easy to overlook a mistake when there are only a couple of entries on a form.

Forms printed on a LaserWriter look terrific. If you don't have access to a LaserWriter, try to rent time on one at a local copy center or ask the help line of the local user group.

START NOW

At this time of year, most of us have negative emotions about our personal finances and tax returns. Even during the rest of the year the subject seems about as interesting as flea powder. These negative emotions are caused to a large degree by our feelings of powerlessness, even guilt, that we haven't done much of anything to bring our financial situation under control.

By beginning to use one of these programs now we can do a great deal to improve our lives, both emotionally and financially. If you balance your accounts even once a month, in a few months a sense of order will begin to replace the disarray. As your records become organized, there is a sense that intelligent decisions can be made because you are now well-informed.

Who knows? You might actually begin to approach your financial record keeping with enthusiasm. When it comes to *MacInTax*, I have occasionally heard the word "fun" used.

SCOTT BEAMER WORKS OUT OF AN OFFICE AT HOME, MANAGING HIS INVESTMENT PORTFOLIO.

MACINTAX

Overall Rating	★★★★★
Follows Mac Interface	★★★★★
Printed Documentation	★★★
On-Screen Help	★★★★★
Performance	★★★★★
Support	★★★★★
Consumer Value	★★★★★

Comments: Updates at reduced rates ($45/year). California state returns also available ($45/$25 update). **Best Feature:** Realism and completeness of forms on screen. **Worst Feature:** Releasing product late. **List Price:** $99. Will work on 128K Mac with one disk drive. Published by SoftView, Inc., 4820 Adohr Lane, Suite F, Camarillo, CA 93010. 1-800-MACNTAX, in CA call 1-800-MACVIEW. Not copy protected.

MACMONEY

Overall Rating	★★★★★

List Price: $74.95. Requires 512K+. Published by Survivor Software Ltd., 11222 La Cienega Blvd., Inglewood, CA 90304. (213) 410-9527. Not copy protected.

DOLLARS & SENSE

Overall Rating	★★★

List Price: $149.95. Will work on 128K. Published by Monogram, 8295 South La Cienega Blvd., Inglewood, CA 90301. (213) 215-0529. Not copy protected.

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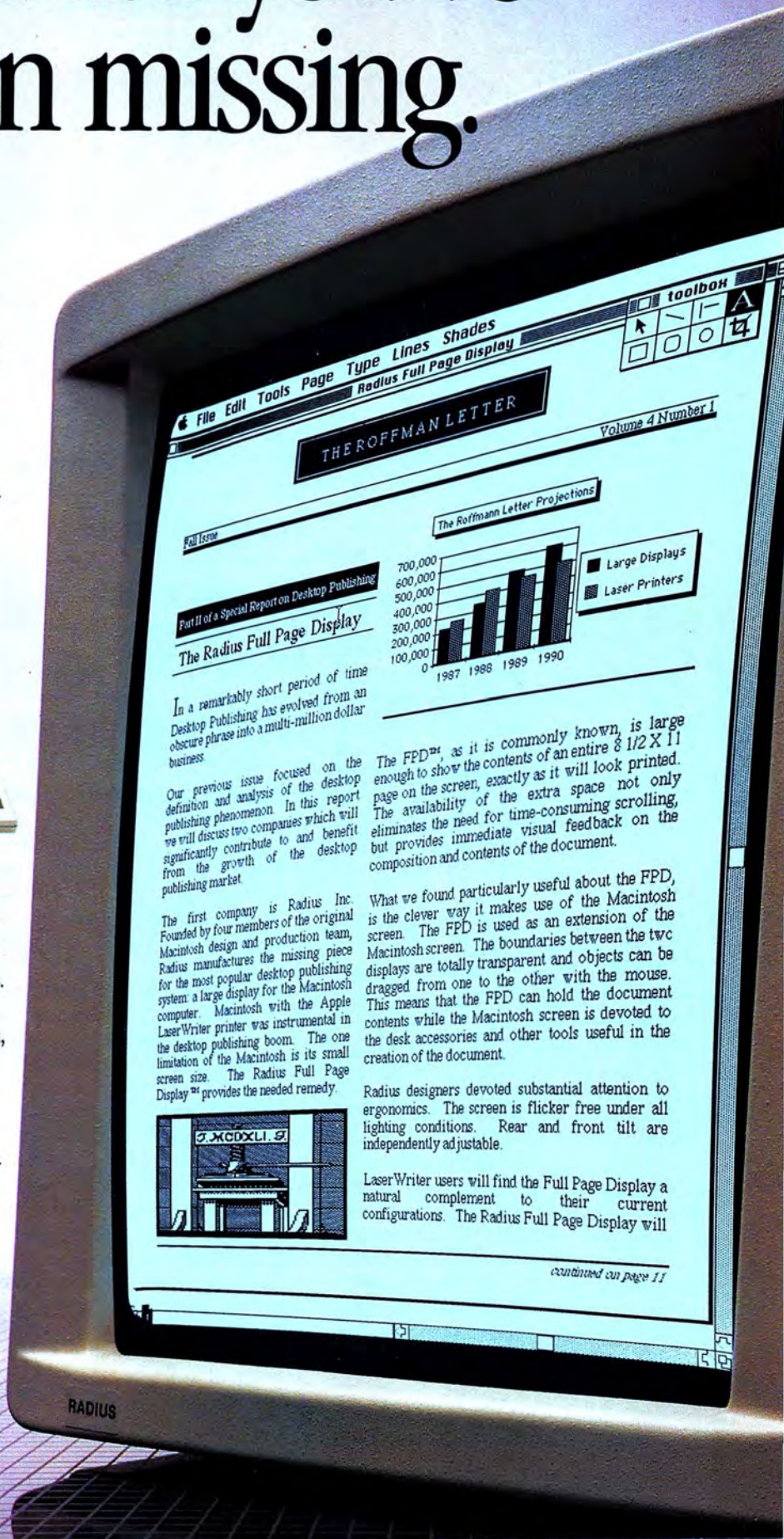
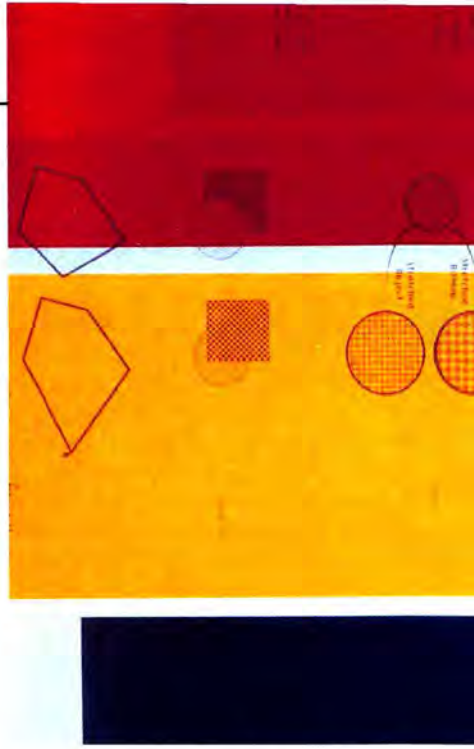




BUFFER ZONE

Hardware print buffers are the ultimate solution for the "wait for it to print" problem. We compare five units.

BY ROBB ALEY ALLAN

ANYONE WITH ANY REAL INTEREST in computers as easy to use general purpose devices respects the Macintosh. You're reading this magazine because you agree, right? But let's face it: the Mac, like virtually all other personal computers on the market today, suffers from one truly woeful problem — printing delays. And while each passing year reveals new computers with ever faster microprocessors, hard disks, and modems, all this speed is to no avail when the computing is finished and the printing begins. Printers — even dot-matrix printers — are limited to numbing lassitude because they are largely mechanical rather than electronic beasts. So we wait at the keyboard. And wait. And wait.

Only three solutions have been offered so far: multitasking, spoolers and buffers. *Multitasking* refers to a computer's ability to perform more than one job at one time, but it requires a lot of design forethought and special circuitry to achieve. The Lisa had it; the Mac lamentably does not.

Spoolers are software utilities that segregate an area of RAM in the computer to hold data for the printer while the remainder of memory holds your program. When you start to print, the data (or "print stream") goes to this spool memory and is fed from there to the printer while you go on about your computing business. But spoolers rely heavily on the microprocessor to monitor things; if the microprocessor is tied up say, calculating a spreadsheet, then spooling — and printing — stops. Worse, spoolers cut the amount of memory available to programs (which can be crucial to packages such as *Excel*).

Thus, *printer buffers:* hardware devices that connect between the computer and printer, acting as reservoirs for the print stream. Buffers *per se* are little more than additional external memory, occasionally with some intelligence in the form of a microprocessor. They have been around for years, often for other output devices (like video displays, where they are called screen buffers), and come with a range of features. Recently a number of printer buffers have finally appeared for the Macintosh family, most sharing a handful of identical features such as the printing of multiple copies and pausing the printer to add cut, or single, sheets.

Some come with software to replace the ImageWriter printer driver, in order to take advantage of the maximum speed of the printer port and get data into the buffer as quickly as possible. But unlike other hardware accessories, many of these units bear little physical or functional resemblance to each other. In this article we will look at five buffers available for use with the Mac Plus and the ImageWriter II.

MACBUFFER

MacBuffer (by Ergotron, Inc. of Minneapolis) is a tall, slender box with a fistful of idiot lights and front panel switches that reveal its versatility. Among its main features: handling two Macs with differing print jobs at one time, independent printing of single-sheet cut paper and printing of multiple copies. Setup of the MacBuffer is simple. The rear panel contains three Apple standard 9-pin plugs, and normal printer cables will work (the Mac Plus and the ImageWriter II, of course, require the new "mini-DIN" round-plug adaptors). Hook the Mac to the MacBuffer and the MacBuffer to the printer. Find the power cord, plug it in, and flip the MacBuffer's rear panel power switch.

The front panel has six distinct control sections:

1. Memory has four LEDs with

The MacBuffer's front panel has many LEDs that detail all aspects of the printing process.

icons to indicate how much of the buffer's overall memory (in quarters, usually) has been filled with incoming data.

2. Mode has a single switch, labeled "one" and "two." Its purpose is to tell the MacBuffer that it will receive data from just one Mac or a pair, and to segment memory accordingly. When the mode is set to "two," the Memory indicator lights work in pairs to tell how much of each segment (in halves) is filled.

3. The Status LED lights indicate that the buffer is receiving data or sending it to the printer.

4. Single-Sheet uses both an LED and a switch to stop the printer at the end of each page so a new cut sheet can be fed in; use it when continuous-feed forms are not being used. This lets you set any print job as "continuous" in the Mac's Page Setup box so the computer itself doesn't constantly interrupt and ask for a new sheet.

5. Copy also uses a light and a switch to arrange for multiple print copies of the downloaded document(s). You simply choose the copy mode; additional presses tell the buffer how many to make.

6. Power is...power.

MacBuffer uses software to speed up the transfer of print data from the Mac. A disk with several modified printer drivers comes with the device, and all you need do is replace the *ImageWriter* system file on your master disk with one of these modified drivers on the MacBuffer disk. (They are provided with different names in case you are still using a *System* without a *Chooser* desk accessory.) This change alone speeds up data transfer from the Mac to 57.6 kilobaud (thousands of bits per second) — six times faster than the standard ImageWriter driver.

Ergotron offers three different versions of the buffer, with 256K, 512K or a full 1 megabyte of buffer memory. (Upgrading of the smaller versions must be done at the factory.) A simple self-test routine verifies that memory is functioning properly.

MAX

MAX comes from our northern friends, DataSpace, Inc. of Ontario, Canada, and is another in a series of products that they have released in the past few years for the Macintosh. Like MacBuffer, MAX is Mac-specific, and as such is exceptionally easy to install and use: plug in all the appropriate cables and turn it on. Again like MacBuffer, MAX comes with driver software (which, as supplied, requires the *Chooser* desk accessory) to speed the downloading of data to the buffer — and here, MAX really shines: speed is increased 24 times to 230.4 kilobaud!

The front panel has a flexible-membrane finish with three functional sections: a group of four "gas gauge" LEDs to indicate how much buffer memory is filled (in quarters); a single-sheet feed selection light; and a ready button/light for use with single-sheet printing and self-tests. The rear panel holds two 9-pin plugs (so usually just a single Mac can be connected to a single printer), the power plug and power switch, and — hallelujah — a reset button for aborting a print job immediately.

MAX doesn't have quite the same versatility as MacBuffer, but it comes pretty close. Single-sheet printing is chosen in the normal way using the Page Setup dialog box on the Mac's screen; but in fact MAX pulls all the pages (if possible) immediately into its buffer and releases the Mac. The single-sheet LED lights up and the buffer prompts for additional single sheets when the printer is ready by lighting the ready LED/button. Feed the sheet, press the button, and go.

One nice touch is that single-sheet and continuous-feed jobs can be buffered on top of one another; just keep downloading the data and the buffer keeps track of which is which.

MAX gives easy button control for single-sheet printing. Both single-sheet and continuous feed jobs can be buffered one after another.

LORI SKLAR

BUFFER ZONE

After the cut-sheet document is finished printing, the buffer waits for you to press the ready button (after you have changed your paper) before proceeding.

There is, however, no provision for printing multiple copies, nor for interrupting printing once it has begun (say, to clear paper jams); for this you must rely on the printer's Select button. On the other hand, MAX is thoughtfully designed to function well in an AppleTalk network. This allows many Macintoshes to share a single printer. Better yet, several MAXes can be distributed about, each to a different printer, and (since identical devices in an AppleTalk network are distinguished by network "names") each can be "named" distinctly, using software supplied on MAX's printer driver disk. Obviously, hooking MAXes into such a network requires special AppleTalk connectors, available from dealers.

As shown on the back of the Universal Printer Buffer, the buffer is equipped with both serial and parallel ports.

JUST SEND A CABLE

There was a commercial on television in New York a few years ago for Barney's mens' store. Young Barney is on a lower Manhattan sidewalk stoop, batting the breeze with some friends. "I want to be a baseball star," says one. "I'm going to be president," says another. "I'll be a rich and famous actor," adds a third. "Well," muses Barney, "you're all gonna need clothes."

I have a nightmare like this. I dream of some young kids sitting on a California beach. Maybe they've just finished surfing. They look cool. "I want to make something that you can play games in color with," says the electronics genius. "Yeah?" says the math wiz. "I want to make an electronic slide rule." The writer adds, "Not me. I wanna invent a typewriter that knows how to spell." They turn to their chum. "Well," says he, "you're all gonna need cables."

Yep. We all need cables, all right. And that's when my nightmare really begins.

It's not overstating the case to say that computer manufacturers have done their customers a shocking disservice by requiring them to buy altogether too many cables with too many plugs — RS232, mini-DIN, DB9, Centronics, etc., etc.

Unfortunately, Apple has helped to make this a problem. The Macintosh and its components have used at least four different plug types (mini-DIN, DB-9, DB-19, and DB-25 on the ImageWriter), some of which resemble each other but don't contain the same wiring (ImageWriter and modem cables, for example). At least Apple makes and markets the correct cable for each connection — if your dealer chooses to carry them.

Writing this story was a true exercise in frustration. Each buffer (save for the MacBuffer and the Max) used a different type of cable, and some used more than one. Some manufacturers carried the necessary cables as accessories. Others recommended using an existing cable on the market (not always from Apple). One didn't make such a cable, nor could it recommend one (Hayes: they had to custom-build a cable to hook up to my ImageWriter II.) None of the manufacturers had adequate information for a novice to connect their buffer to a Macintosh Plus, although some did explain hookups to a straight Macintosh with the old DB-9 plugs. Two buffers (the Optimizer and the Universal Printer Buffer) even had DIP switches and jumper boxes (inside the cabinet, of course) to enable a user to correct the wiring circuitry to work with different cables—but this was far, far from easy and should be totally ignored if not inescapably necessary. Unless, that is, you have a degree in electrical engineering or like to make your own cables for fun.

Users, unite! This is unforgivable. It's like having to buy a different lightbulb for every lamp — without knowing exactly which one to get. Manufacturers nod dutifully to "standards", then proceed to make their cables with jumped wires, switched wires — hell, no wires at all sometimes.

In the meantime, to save wear and tear on your temper, see the accompanying box on cables, DIP switches, and jumper positions for each buffer. And remember: these only work with the Macintosh Plus and the ImageWriter II. If you have something else...call the manufacturer.

If only Barney had known.

UNIVERSAL PRINTER BUFFER

The Universal Printer Buffer (UPB) from Johnathon Freeman Designs in California is meant to be used, not just with the Macintosh, but with virtually any computer and printer combination on the market. Thus, it comes equipped with two pairs of ports: serial connectors and Centronics parallel connectors. These can be linked in any combination: serial to either serial or parallel, or (useless to owners of the serial-equipped Mac) parallel to serial or parallel.

Such a broad design mandate requires that the UPB work with any number of differently wired serial cables, and to overcome the inevitable incompatibilities, Freeman and group have included within the UPB's cabinet a number of DIP switches and two jumper blocks, by which the connection between the input or output serial ports' pin assignments and the internal circuitry can be rerouted.

If that last sentence doesn't make any sense to you, then neither will the task of moving these jumpers, nor the manual's explanation of it. This is definitely not a pursuit for

LORI SKLAR

beginners. While obviously a good idea (not to mention giving the product the broadest possible market), the UPB is quite un-Maclike (i.e., not simple) in concept and execution.

One missing component of the UPB as a printer buffering system is software — there is no alternate ImageWriter driver to maximize the speed of the Mac's serial port. While the unit works fine in execution (after you finally figure out which jumper blocks to use and how to set DIP switches), nevertheless it doesn't have the speed of some of the other buffers. It saves little to no time when printing graphic images (see the performance chart). However, one advantage of relying on the Apple-standard driver is that revisions with newer features (such as bidirectional printing) can be used.

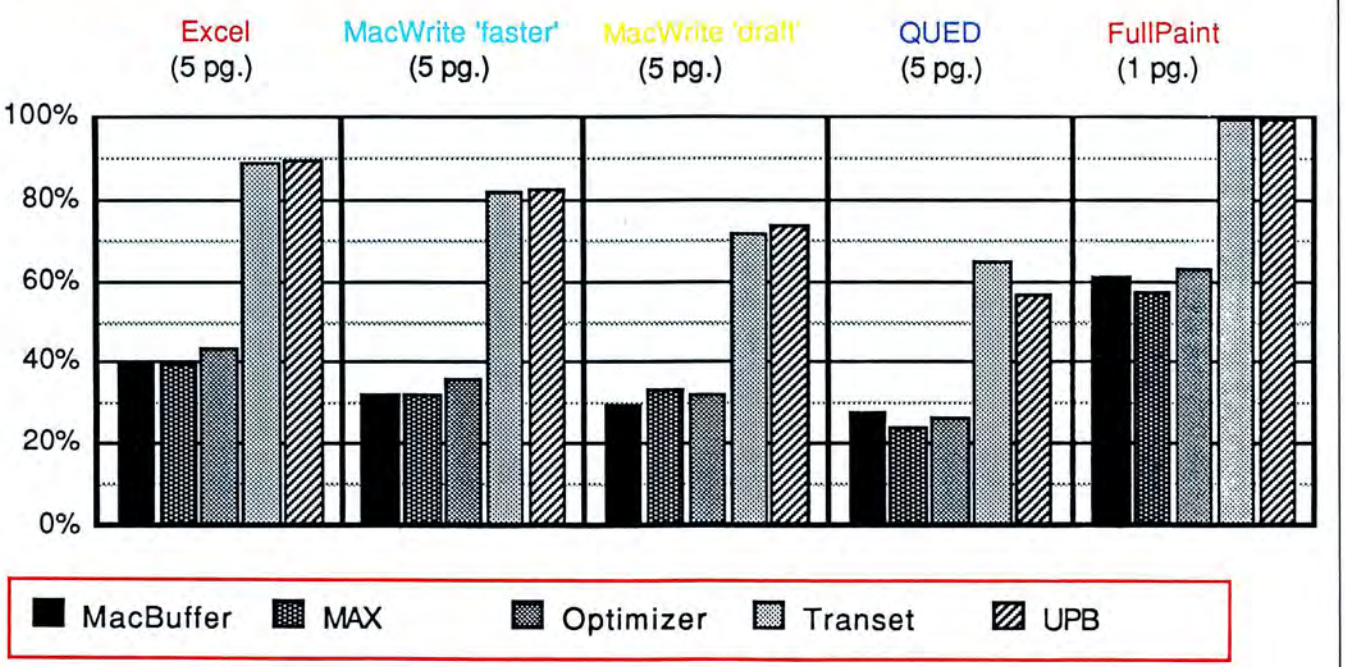
PRINTER OPTIMIZER

Applied Creative Technologies' Printer Optimizer gave me pause when I first saw it. Like the UPB, it is meant to be used with most computers and printers available, not just the Mac. It is marketed in an expandable fashion, the basic unit

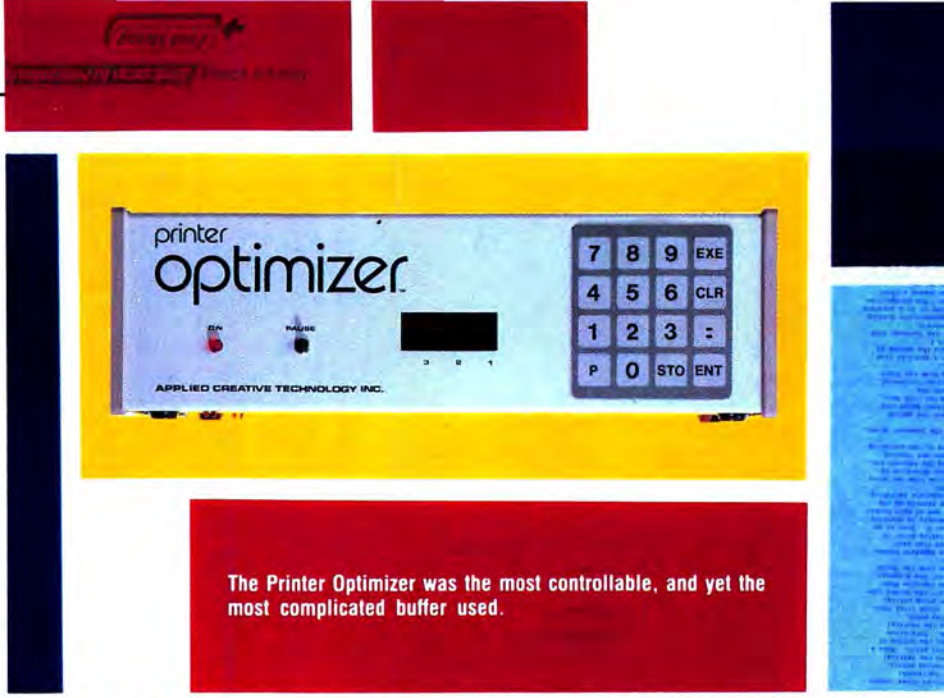
SPEED TABLE

	Normal	MacBuffer (1 Mb)	MAX (1 Mb)	Optimizer (512K)	Transet (512K)	UPB (256K)
Excel (5 pg.)						
start	0:00:11	0:00:14	0:00:14	0:00:14	0:00:14	0:00:13
finish	0:07:08	0:03:03	0:03:00	0:03:17	0:06:27	0:06:27
percent of Normal		41%	40%	44%	89%	90%
pages printed	5	1.5	1.5	1.5	3.5	4.25
MacWrite 'faster' (5 pg.)						
start	0:00:09	0:00:09	0:00:08	0:00:08	0:00:10	0:00:08
finish	0:05:36	0:01:55	0:01:54	0:02:06	0:04:39	0:04:38
percent of Normal		32%	32%	36%	82%	83%
pages printed	5	1.25	1.5	1.5	3	3.5
MacWrite 'draft' (5 pg.)						
start	0:00:05	0:00:06	0:00:04	0:00:05	0:00:07	0:00:05
finish	0:01:49	0:00:37	0:00:39	0:00:39	0:01:22	0:01::22
percent of Normal		30%	34%	33%	72%	74%
pages printed	5	1.25	1.5	1.75	3.5	3.5
QUED (5 pg.)						
start	0:00:12	0:00:13	0:00:11	0:00:11	0:00:14	0:00:12
finish	0:04:36	0:01:27	0:01:15	0:01:21	0:03:06	0:02:43
percent of Normal		28%	24%	27%	65%	57%
pages printed	5	0.75	1.5	1	2	2
FullPaint (1 pg.)						
start	immed.	immed.	immed.	immed.	immed.	immed.
finish	0:05:11	0:03:12	0:03:00	0:03:17	0:05:10	0:05:10
percent of Normal		62%	58%	63%	100%	100%
pages printed	1	1	1	1	1	1

PERCENT OF NORMAL PRINT TIME



BUFFER ZONE



The Printer Optimizer was the most controllable, and yet the most complicated buffer used.

equipped with a single pair of parallel ports (useless to Mac users, since the Mac only transmits a serial signal and the Optimizer cannot make the translation internally), but with an option to add an internal circuit board containing two (or more) serial ports with 25-pin plugs.

Again like the UPB, the Optimizer comes with DIP switches and jumper blocks to reroute the serial signals from port to chip appropriately. ACT has made the process just slightly easier (mainly by supplying detailed instruction sheets for most printers and computers on the market), but it still leaves a lot to be desired. The documentation is a bit disorganized and difficult to use, but it's the only one whose documents explain what the various handshaking protocols actually mean — perhaps of dubious worth for a simple device like a printer buffer.

On the other hand, the Printer Optimizer goes far beyond mere buffering in design and capability. Using a numeric keypad on the front panel, you can enter any of a series of commands to alter the operation of the buffer or printer or, more significantly, to modify the contents of the print stream itself. In addition, multiple internal storage areas allow separate print jobs to be downloaded and later merged into a single print run.

Say you wanted to perform a mail merge, in which the same letter will be sent to a number of recipients. You can download the letter contents one time into a storage area of the buffer, and download the names and addresses into another, each separated by a special control character that you have previously defined with the numeric keypad. The buffer will automatically interleave the names and the text and send the entire mess to the printer. No need for special software!

So, even though it practically requires a degree in electrical engineering to fully understand, the Optimizer offers capabilities unmatched by the other printer buffers for the Mac. If you need it, there is nothing to replace it. But be prepared to study.

TRANSET 1000

Hayes' Transet 1000 is also something more than a printer buffer, combining a printer buffer, a modem buffer and a multiport switching center. As such, it can be

FEATURES TABLE

	MacBuffer	MAX	Optimizer	Transet	UPB
Ports					
Serial	2 in, 1 out	1 in, 1 out	1 in, 2 out	1 in, 2 out	1 in, 1 out
Parallel	no	no	1 in, 1 out	1 out	1 in, 1 out
Switchable?				yes	yes
Capacity	256K, 512K, 1Mb	256K, 1Mb	65K, 1 Mb	128K, 512K	64K, 256K
Printers	ImageWriters	ImageWriters	any	any	any
Copy function	yes	no	yes	yes	yes
Reset function	no	yes	yes	yes	yes
Pause function	no	no	yes	yes	yes
Single sheet function	yes	yes	no	with software	somewhat
Software					
Speed	56.7 kbd driver	23.4 kbd driver	37.5 kbd driver		
Features				configures unit	
Warranty	1 year	1 year	90 days	2 years	1 year
Idiot lights					
Power	yes	yes	yes	yes	yes
Buffer full	yes	yes	with LED	no	yes
Processing/busy	yes	yes	with LED	yes	no
Single sheet	yes	yes	no	no	no
Copy	yes	no	with LED	yes	yes (ready light)
Self-test	yes	yes	yes	error light	yes
Breakout box/jumpers	no	no	yes	no	yes
Other features	can share two Macs with one printer	can connect to an AppleTalk network to share Macs and printers	translation of data, control of printer through numeric keypad, port switcher	also acts as modem buffer, port switcher	serial and parallel ports can be linked

SCORECARD

	MacBuffer	MAX	Optimizer	Transet	UPB
Documentation	••	•••	••••	•••••	•••
Performance	•••••	•••••	••••	•••	•••
Consumer Value	•••••	••••	••••	••••	•••
Best Feature	design and ease of use	speed and ease of use	custom control of virtually all print related functions	can act as modem buffer	internal jumpers allows customization to any serial printer and cable
Worst Feature	no simple reset switch	no multiple copy function	difficult to master	odd plugs require custom cables; slow	limited memory and no driver software makes unit relatively sluggish
Price	1 meg, $699.95	1 meg, $698	1 meg, $1,085	128K, $399 512K, $549	64K, $269 256K, $329
Manufacturer	Ergotron, Inc PO Box 17013 Minneapolis, MN 55417 (612) 854-9116	DataSpace Corp. 205 Riviera Drive Markham, Ontario Canada L36 2L6 (416) 474-0113	Applied Creative Technology, Inc. 10529 Olympic Dr. Dallas, TX 75220 (800) 433-5373	Hayes Microcomputer Products, Inc. 705 Westech Dr. Norcross, GA 30092 (404) 449-8791	Johnathon Freeman Designs, Inc. Hunters Point #110 San Francisco, CA 94135 (415) 822-8451

used to speed up printing and capture and hold electronic mail received by modem — all at the same time.

Essentially, Hayes has equipped the Transet with several separate internal buffer areas, each independently addressable. In addition, the various ports can be interconnected virtually at will, to allow the Transet to act as a sort of electronic traffic center between any serial or parallel devices. Finally, the unit is designed to integrate with Hayes modems, and can be programmed while using standard telecommunications software just as though you were sending commands to the modem. For example, using commands from the keyboard or a program, you can alter the routing of internal data from port to port, change page numbers in a print job, define page margins, time or date stamp pages and so forth. Meanwhile, the unit continues to function simultaneously as a modem buffer, so you can also take advantage of its ability to receive electronic mail and replay it over the phone when prompted.

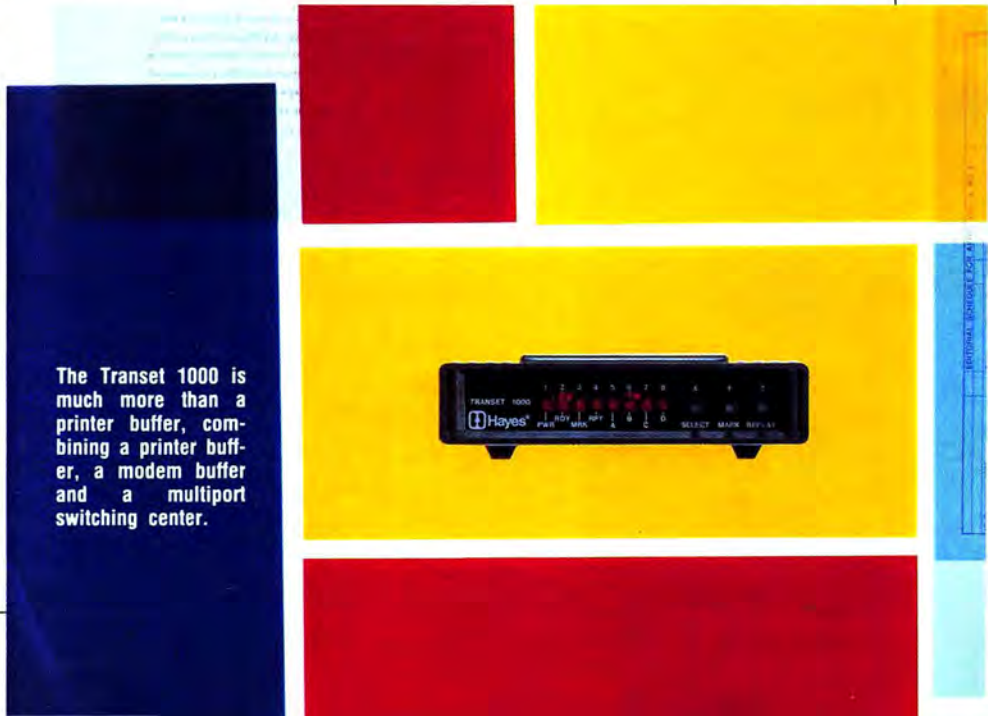
Physically the Transet resembles many of the other products in the Hayes family: a low-slung aluminum box with a black translucent front panel and ridged roof for stacking. The front panel has a host of LEDs, and three push-button switches that work in combination with each other to perform a variety of functions.

One unfortunate design aspect concerns the rear panel plugs: Hayes has chosen to provide the Transet with a rather unusual set. Two plugs are familiar 9-pin serial types — but one is female and one is male. Of course no cable made by Apple will fit the male plug. Further, the other port is a 15-pin serial or parallel type, and there simply is no cable available anywhere to connect from that to the round DIN port of the ImageWriter II. Expect to consult your local custom electronics shop; they may be able to create one for you.

FINAL PRINTOUT

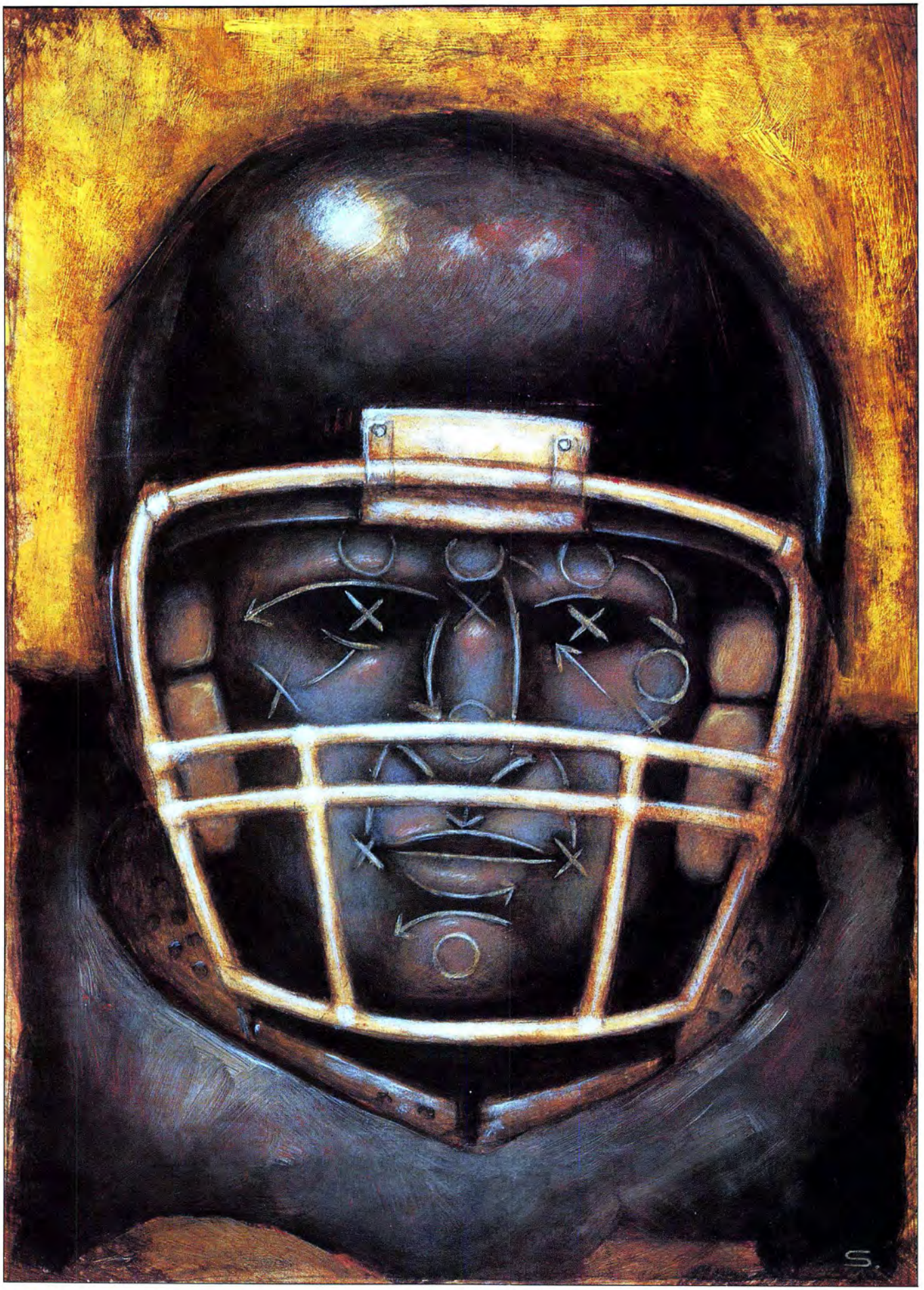
Obviously, these five devices vary a great deal in their designs and capabilities. Two are simple to use, three quite complex; several use high-speed drivers, another adds power in hardware that no software driver for the Mac can match. To get a feel for the operational differences, see the accompanying charts and tables (be forewarned that each buffer requires different cables — see the sidebar). Oddly, even those that don't take advantage of special software still helped speed up some printing tasks. With some thought about your needs, there is certainly one amongst the group that can free you from the tyranny of the scratchy sound of a slow printer.

ROBB ALEY ALLEN IS A NEW YORK AREA COMPUTER WRITER AND REAL ESTATE EXPERT.



The Transet 1000 is much more than a printer buffer, combining a printer buffer, a modem buffer and a multiport switching center.

LORI SKLAR



DAVID SHANNON

PUNT, PASS AND CLICK

Mac Pro Football takes you out of the armchair and onto the field.

BY HARRY CONOVER

"THIRD DOWN AND THREE AT the Chicago 28... 12 seconds left in the game... the Forty-Niners, trailing by 5 and with no time-outs, come out of the huddle. Montana brings them to the line. He waves his arms to silence the partisan San Francisco crowd, chilled by the December winds. The Bears drop back into a nickel defense. There's the snap. Montana rolls to his right. He's looking — looking — throws. Dwight Clark has it at the 15. He's down to the 10, the 5, he's tackled at the 2-yard line as the gun goes off! Chicago wins 24-19."

Exciting? You bet! A dream match-up of two great Super Bowl teams: the 1985 Chicago Bears playing the 1984 San Francisco Forty-Niners on a windy day at Candlestick Park. All brought to you by *Mac Pro Football* from Avalon Hill, the first truly interesting sports simulation for the Macintosh.

When the Macintosh first came out many sports fans, bored with years of being slavish bookkeepers to table-top statistical games like *Strat-O-Matic* or *APBA,* fantasized about the great simulations we were sure to see Real Soon Now. The mix of graphics, sound and the Macintosh user interface seemed to be a "sure thing" to lure some developer into producing the game of our dreams. It still wouldn't have happened had not David Holt spent 4 long years porting his dream into reality with *Mac Pro Football.*

Holt's love of the game clearly shows in this truly fascinating statistical simulation of NFL football. *Mac Pro Football* offers not only an intriguing entertainment but also a learning base about the strategies and tactics of coaching. And his clearly written analysis of past Super Bowl games is a bonus to the thoughtfully written manual that explains *Mac Pro Football.* Add to this his creation of a computer coach as resourceful as the team it coaches for times when you can't find a human opponent.

The game comes in an attractive bookcase-style box on two 400K floppy disks. You'd better plan on spending some time with the manual, the *MSFL Coach's Playbook,* and its addendum, the *Tech Manual.* Not only can't you play the game without them, a clever but annoying keyword scheme forces you to have the main manual at the ready in order to begin play.

The Team File disk contains 38 Super Bowl teams. Legendary teams like the Pittsburgh Steelers of '74, '75, '78 and '79; the Joe Namath-led New York Jets of '68; the feared Dallas Cowboy squads of '70, '71, '75, and '78; and the goonish Oakland Raiders of '67, '76, '80 and '83. Recent Super Bowl opponents like the '85 Chicago Bears and New England Patriots and the '84 San Francisco Forty-Niners and Miami Dolphins connect the past to the present.

The statistical simulation of *MPF* is rooted in the numerical rankings (from 0 to 100) of each team's offensive and defensive units in their effectiveness for and against the run and the pass. Specific individual ratings in running, passing, kicking and throwing are given to the team's named offensive players and are used to determine play results.

The list of features will boggle the mind of the most fanatical football fan. How do three levels of coaching skill sound? Being able to call up an on-screen statistics report that tells you how many tackles or sacks a

PUNT, PASS AND CLICK

player made? Ever play a game where you can design the pass routes for a receiver? Designate the holes for the runner? Select from four different passing positions for your quarterback? Even have him run the bootleg?

Mac Pro Football hasn't slouched on the other side of the line either.

The list of features will boggle the mind of the most fanatical football fan. How do three levels of coaching skill sound?

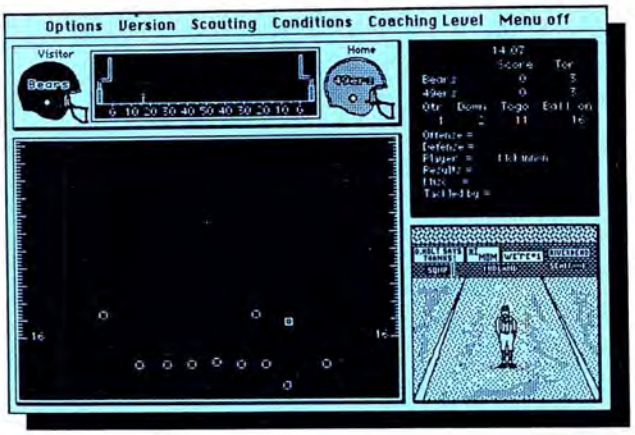
The defense has at its disposal packages like the Blitz, Short Yardage and Nickel as well as three standard 4-3-4 defenses. The defensive coordinator can set the line's alignment and the speed of its pursuit of a ball carrier. Pass defense is not restricted to simple man-to-man or zone coverage, but goes the extra step in allowing you to select the type of coverage on the receivers as well as to choose a double team assignment.

Everybody talks about the weather. Now you can do something about it. Based on the venue of the home team and the time of the year you can set the temperature, add wind and stir in rain or snow. Or let the computer do it. Depending upon the severity of weather factoring the elements might play a significant role in determining the outcome of the game. There is a reason the Super Bowls are played at warm weather sites.

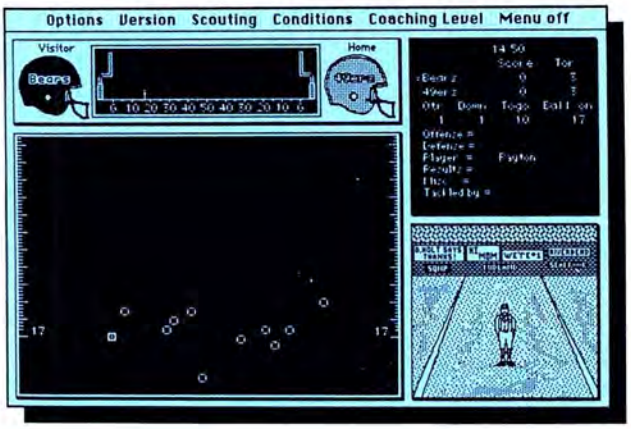
A truly unique feature, something akin to the Ultimate What If, is the Set Game Situation. You can recreate any game situation and replay it to see if different offensive and defensive calls would have affected the outcome of the original play. The *MPF* manual includes some classic what-if scenarios that are yours for the replaying.

Rounding out this football lover's package is the all important Save Game feature ("Dinner ? Already ?") and a separate program called *MSFL Stats*. The Stat Report is automatically saved at the conclusion of every game and contains three pages of statistics that can be viewed on screen or printed out.

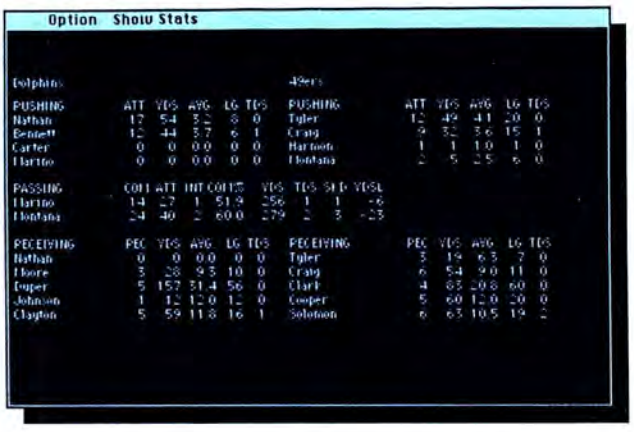
All this and you get to watch the play unfold on your screen as the players, represented as X's (defense) and O's (offense), execute the play. You will see that great block spring a running back. Or that cut by a pass receiver leave a defensive back eating turf. Or your quarterback being swarmed by an all-out blitz.



McMahon has rolled to the right and, under heavy pressure from three Forty-Niner linemen, throws a completion to McKinnon at the 20-yard line.



Payton, using a block from the split end on the right outside linebacker, heads upfield after his sweep around left end.



A typical page from *Mac Pro Football*'s Stat Report file after the Miami Dolphins have barely edged the San Francisco Forty-Niners 26-21.

LETS GO DOWN TO THE FIELD

Let's say you're coaching the '85 Chicago Bears against the computer's '84 San Francisco Forty-Niners. You've won the coin toss (you actu-

This is the second of the three pages in *Mac Pro Football*'s Stat Report. Note the interesting stats in the bottom four rows.

The direction and type of running plays are selected by clicking on the numbers in the menu at the lower right.

The third page of the Stat Report shows the individual defensive player statistics.

ally can call and see whether it's heads or tails) and elect to receive. You run the kickoff back to your own 17. The defense makes its secret selection first (if you're playing face-to-face you'll have to settle on some sort of No Peeking method with your opponent) then it's your turn to huddle. You decide to send Walter Payton on a sweep around your left end, but need some misdirection to give him an extra step. You can choose Counter from the running play option menu if you anticipate the Niners will be pursuing quickly. You click on RUN, click on Payton's name then, click on the hole number the play is directed towards, click on COUNTER and click on EXECUTE.

The play unfolds on your screen. You watch as the running backs take a false step then Payton's O sprints to his left. The offensive line is holding up well as he makes his cut up field, but wait a minute! Here comes the right outside linebacker, fighting off a block to stop Payton at the 20.

Now it's second and a long 7 yards for the first down. An obvious passing down? Maybe. But the Niners might try a blitz, hoping to pin you down further. One way to stop that is either a draw play or a quick pass over the middle. After consulting the Scouting Report pull-down menu to see who your best receiver is, you design a 7-yard pass that will take McKinnon up field 2 yards, and towards the middle of the field 5 yards. You also make sure that McMahon uses a roll-out drop-back to buy him some passing time.

The defense has at its disposal packages like the Blitz, Short Yardage and Nickel as well as three standard 4-3-4 defenses.

As the play unfolds you smile as you see McMahon's O roll to his right, avoiding the Niners' blitz. McKinnon completes his pattern over the middle and grabs the pass for a 5-yard gain. Bringing up third and 2 from the 25.

Pass or run? Put on the headphones and call the scouts sitting in the press box by looking at *Mac Pro Football*'s running game commentary that's sent to your ImageWriter after every play. It not only gives you the result of the play but also the various levels of coverage the defense was employing. That's very helpful in spotting tendencies, but keep in mind that the computer has its scouts too.

On a third down and short yardage you reason the Niners will be looking for Payton to run the 2 yards but might protect themselves against a short pass (3 to 9 yards) by calling a man-to-man defense. So

PUNT, PASS AND CLICK

you'll try and surprise them by selecting the speedy Willie Gault to catch a medium pass (10 to 19 yards) and design a two-move pass route that will shake off all but those defenders back pedaling before the ball is snapped. McMahon will use the standard 7-yard drop and hope for enough time to get the pass off. Some teams will blitz in this situation. Will the Forty-Niners?

Click. McMahon's little O drops back, the Niner's defensive line is tight, looking for Payton to run. Gault, who has drawn single coverage, makes his first cut, then his second. McMahon waits until the last minute and throws. Complete to Gault at the 37. He breaks one tackle and is finally hauled down at the Bear 43. An 18-yard pass and run play on a third and two. Nice call, coach.

Just for the fun of it, you could use the Set Game Situation menu bar function and run that third down play again to see what would have happened if Payton had run a counter trap to the right. By answering a series of questions you can recreate the score, field position, down, distance, time remaining and team in possession prior to the last play. This feature can come in very handy to replay critical points of a game or as a learning aid in mastering your understanding of the game.

NOTHING'S PERFECT

MPF is so rich in detail that you might be tempted to overlook any flaws. And, unfortunately, it has some annoying shortcomings. Holding onto something? Good. *Mac Pro Football* was written in *Microsoft BASIC* 2.1, and despite the inclusion of a special *RunTime BASIC* package on the disk (meaning you don't have to own *Microsoft BASIC*) the games tend to take well over an hour.

Part of the problem is the method of play selection which, at the Championship coaching level, can include up to nine decisions and mouseclicks before the play is executed. And that's playing against the computer. Imagine face-to-face play. At the Playoff or Contender coaching levels, where you have fewer play decisions to make, the game moves faster, but is nowhere near as compelling or as challenging.

On offense there is no provision for plays that originate or have part of their action behind the line of scrimmage or are designed to go out of bounds. Therefore you'll have to "fake" screen passes, quick outs, reverses, running back option plays and the clock-stopping intentional sideline overthrows.

Real football games are won and lost on the ability of injured starters and their substitutes to perform. In what appears to be a simplistic solution to this situation there are no injuries or substitutions except for the insertion of a "specialty back." Which means that, good day or bad, you're stuck with the starting quarterback.

One wonders about the choice of the standard 4-3-4 defense in *Mac Pro Football*. This may have been the less problematic choice in terms of game design (which the *Mac Pro Football Tech Manual* coolly alludes to) but many NFL teams use either a 3-4-4 defense or some variation. Since the game's defensive ratings are based on a team's real-life type of defense (not necessarily the 4-3-4) this omission seems somewhat curious and cannot be explained away by stating that it's only the difference of a linebacker. Would you, as coach, sit down an effective fourth linebacker for another defensive lineman?

Penalties are handled clumsily. They are whistled before a play can be called, are identified only by the offending team and distance, and are always accepted. There are situations where a team might benefit by not accepting a penalty but you can't do this in *Mac Pro Football*. So you won't see any pass interference, clipping, roughing the kicker or offsetting penalties.

READ THIS MANUAL

You cannot expect to have any success without first absorbing the *Mac Pro Football* manual called the *MSFL Coaches Playbook*. This 52-page primer, written in the style of a real NFL playbook, contains an explanation of the underlying offensive and defensive philosophies of the game. Diagrams of running and passing plays, defensive formations and a chart showing the correlation between all offensive and defensive plays provide information critical to forming a basic understanding of *Mac Pro Football*.

A backup pamphlet called *Mac Pro Football Tech Manual* is the next must-read document as it amplifies some of the game's less salient features and includes important Macintosh specific operating instructions.

SUMMING IT UP

Without a doubt, *Mac Pro Football* is the best sports simulation that ever ran on a Macintosh. Its multileveled coaching options allow you to step up from eager participant to clipboard waving fanatic. The dynamics of offensive and defensive play selection are true-to-life and fascinating. While the appeal of watching little X's and O's may be lost on some, the graphic display does give one the feel of being part of the game and not just a spectator. Throw in the in-game running commentary, the end-of-game statistics report, package it all with great documentation and you have yourself the answer to your Dream Sports Game quest.

HARRY CONOVER IS THE CEO OF COMPUTER SIMULATED SPORTS, INC., AND A MAUG STAFF MEMBER.

MAC PRO FOOTBALL

Overall Rating	★★★★
Mac Interface	★★★★
Printed Documentation	★★★★★
On-Screen Help	N/A
Performance	★★★★
Support	★★
Consumer Value	★★★★★

Comments: The first statistical simulation of NFL football for the Mac. Comes with 38 Super Bowl teams. **Best Features:** Multilevel coaching options; graphic display of plays; superb documentation. **Worst Features:** Cumbersome play selection process; no provision for injuries or in-game substitutions; handling of penalties. **List Price:** $49.95. Published by the Avalon Hill Game Company, 4517 Harford Rd., Baltimore, MD 21214. (800) 638-9292. Password protected.

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Programmer Utilities (4162)
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(Draw many standard software engineering drawings such as Dataflow diagrams, flowcharts etc.). Fast Eddie A powerful programmers' text editor. Includes documentation.
Programmer Utilities (4163)
MemTest, MightFinder, FOBT Format, PRAM 2, Font -FKEY-DA sampler. (This very useful program will open any font, Desk Accessory or Function Key without having to install them onto the System. Also included: Cleanup, Mac ID, Hex & Ascii Strings.
Developer Stuff (4087)
ResDecompile. (A Macintosh application which can convert certain types of resources in a resource file, into source code suitable for compiling with ResEdit (Apple's Resource Editor).
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Pop Music songs.
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A varied selection of classical as well as contemporary songs.

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Midi Term (4117) Midi 2, Midi Mouse, 7th Heaven
CZedit Demo (4118) CZlibrarian (For use with the Casio CZ101™ Keyboard).

Educational

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Math Master (4139) Venn, Conformal Maps, Automata, Tree and Tangent.
Speech Synthesis (4140)
The following programs demonstrate Speech Sybthesis: Rona,Talking Eliza with demo files & instructions, Speak Easy and La Limerick Machine. (This one will read limericks that are typed.
Math Tutor (4181)
Weinberg. This program facilitates drawing math functions like integrals,summations etc. Equation, Math Drill & Camera tutorial.

Engineering:

DesignScope (4119)
Simulation Program that helps design component Circuitry.(Demo Version)
Digital Simulator (4120)
Digital Logic Simulator. Build & test electrical circuits.

Utility Programs

System Utilities (4182)
BootEdit (After the Welcome to Macintosh message),Change application font, Install (Install resources to your system that will RESUME your program after many system bombs), Window Changer (lets you customize the Save As & Open dialog boxes)
Disk Utilities (4183)
Disk Cat. Disk cataloging program. Disk Test, Display (text file reader), & Scavenger Mac (recover files).
Diagnostic Utilities (4184)
DiskTest, Speed Check, Ram Test 1.7, Dir-Acta-ry (Reads directory of a disk then converts it to an outline document for use with the Acta DA.), Remount HD20 (Remount an Apple HD20 that has been accidently thrown into the trash).

Updated Disks

Redit 1.2 (4185)
European Resource editor. This program is excellent for translating Macintosh programs to other languages. It does nor alter any of the resources.

Switcher 5.0.1 (4186)

Languages

Basic Compiler (4101) Complete with documentation and examples.
Smalltalk (4099) Disk also includes Ada and a 68000 disassembler.
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McAsm (4033) 68000 Assembler and Linker.

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Display Characteristics					
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Pixel Density	72 dpi	80 dpi	70 dpi	77 dpi	80 dpi
Hardware Issues					
Video RAM	22K	128K	128K	128K	128K
Mac Modifications	N/A	Clip-on	Clip-on & Solder	Remove CPU & Solder	Clip-on
Macintosh Fan	No	Yes	Yes	in monitor	No
Installation	N/A	dealer	dealer	factory	User or Dealer
Drill Holes	N/A	No	Yes	No	No
Brightness Control	Front	Front	Rear	Rear	Rear
Software Issues					
Patch Software	N/A	Resource File	Startup Program	FPD ROM	Startup Program
Macintosh Screen	N/A	Disabled	Disabled	Active (option)	Toggle

Source: MACWORLD Magazine published compatitive statistics January 1987. Stretch Screen™ released after the review was published, was not reviewed by MACWORLD and data was supplied by Network Specialties.

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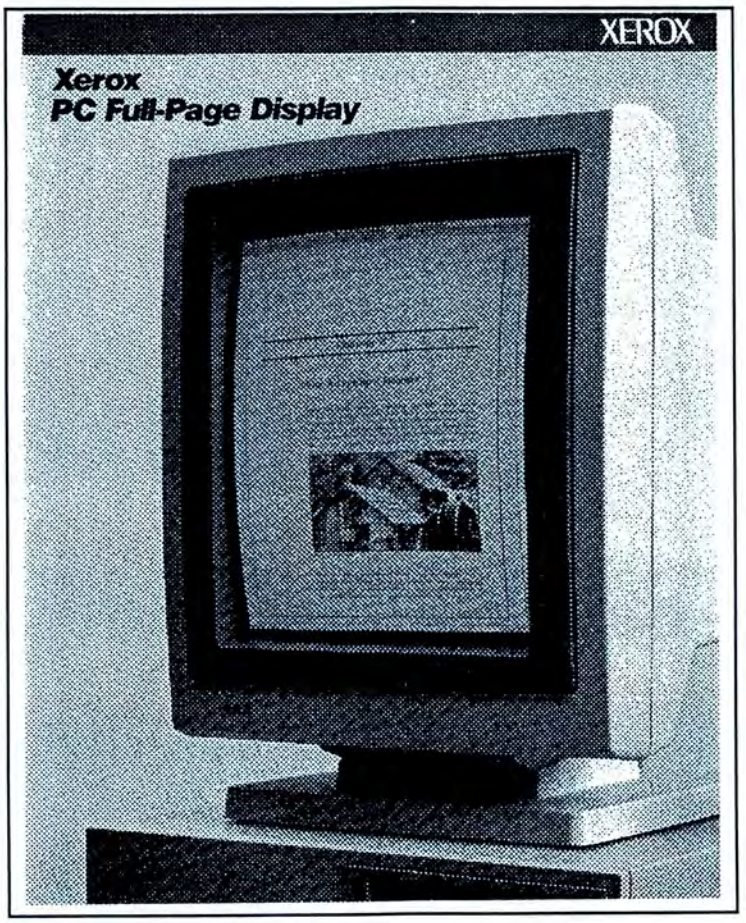

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PROLOG— JUST THE BEGINNING

Five new language programs bring AI power to the Macintosh.

BY DAN SHAFER

ARTIFICIAL INTELLIGENCE. THE very words conjure up images of computers taking over the world, of robots reproducing themselves, people subjugated and enslaved. Despite all the publicity of the past half-decade and all of the unspectacular successes and well-known failures, artificial intelligence — or AI as it is more often called — retains an aura of mystery and mysticism.

Up to now, programming in AI has been almost exclusively in the domain of mainframes and minicomputers. Until the past year or so, anyone who maintained that a personal computer could be a viable environment in which to develop a really "useful" AI program would have been laughed out of the room by the vast majority of workers in the field. Micros were thought to be too small and too slow to be practical in an application as memory-hungry as AI. But all of that has changed. The tools for meaningful AI development have migrated to the micro world. Some of the leading researchers and journals have even begun to pay real attention to the micro-based AI work going on around them. And more and more people are beginning to explore this burgeoning field with computers on their desktops at work and at home.

Although AI programming can be done in any language, the two which are at the forefront are LISP and Prolog. LISP comes from LISt Processor, that's appropriate since lists are the fundamental data structure involved in AI programming.

Prolog derives its name from the fact that it was specifically designed for PROgramming in LOGic. It's a good language in which to develop programs that emulate the logic of human thought and problem-solving processes.

Until early 1986, virtually all United States AI research and exploration was done in LISP. Prolog was widely used in both Europe and Asia. It had been invented in France, and the basic standard syntax (known as Edinburgh Standard) was developed in Scotland. Japan even adopted Prolog as the official language of its highly touted Fifth Generation Project. But in this country, Prolog was a poor relative of LISP. Borland International changed all of that in early 1986 by announcing that it would soon deliver a Prolog for the IBM PC. *Turbo Prolog* sold over 60,000 copies in its first few weeks on the market and immediately made Borland the largest single supplier of AI programming languages in the world. Prolog had become an instant success in the United States. And it had gained a great many new adherents as well.

PROLOG A LA MAC

Before *Turbo Prolog* came along, there were perhaps a half-dozen implementations of that language in the IBM world and none on the Macintosh. By the fall of 1986, no fewer than six versions of Prolog were available for the Mac and rumors had it that there were more in development. These Prologs ranged from a low-cost, well-documented version aimed at those interested in learning the language to a $495 development environment in the latest international "standard" dialect.

Here, I'll take a brief look at each of these Prologs for the Macintosh, comparing and contrasting them with one another. The objective is to make your decision whether to buy a Prolog or not, as well as the selection of an appropriate version, easier. First, though, a bit of background about this strange and in many ways exciting "new" language is in order.

Prolog is a *declarative* language. This is in contrast to BASIC, Pascal, C and other popular programming languages which are *procedural*. In most of these languages, a computer program consists of a kind of recipe: a step-by-step procedure that tells the computer *how* to solve the problem at hand. A Prolog program, by contrast, provides a description of the problem to be solved and lets the

language supply the procedural instructions inherent in its design. As a result, a Prolog program consists of statements of fact describing a problem and rules about how to deal with such facts. But it has no FOR-NEXT loops, DO instructions or other "commands." Figure 1 combines a listing of a sample Prolog program with a typical user interaction session with it. If you are an experienced programmer in a more traditional language, it may not look much like a computer program at all!

The part of the computer program that solves the problems posed by the programmer is built into Prolog. The heart of the language is an "inference engine" which draws conclusions from facts which are not explicitly given in the program itself. This is, of course, the very essence of Logic with a capital "L." In logic, we encounter this traditional thought sequence:

All men are mortal.
Socrates is a man.
Socrates is mortal.

In Prolog, we convey the first two facts. Then we ask the computer whether it is true that Socrates is mortal. Notice that if we wanted to draw that conclusion in a program like BASIC or Pascal, we'd have to provide the information explicitly or write a routine that would analyze the information logically and draw the conclusion. Prolog is a conclusion-drawing language by design.

AKIO MATSUYOSHI

Five of the six Prologs on the market were available for review at press time. In evaluating and comparing these Prologs, overly technical issues have been avoided. A serious Prolog developer would find many additional strengths and weaknesses in each of these products. The goal here is to provide the user who is an experienced programmer and interested in exploring AI on the Macintosh with some basic information about these products and their relative merits.

One of the most significant aspects of this comparison is the degree to which the implementations adhere to the *de facto* Prolog standard. It can be — and often is — argued that there really is no such standard yet. But many Prolog programmers and researchers would agree that the Edinburgh standard (also referred to as the C&M standard after the authors of one of the classic works in the field, Clocksin and Mellish) is fairly established as a yardstick. That standard has been used here.

Now let's turn our attention to the five Prologs that are really the subject of this article. They are: *AAIS Prolog* from Advanced AI Solutions; *ExperProlog II,* distributed on the Mac in the United States by Exper-Telligence; *LPA Mac Prolog,* distributed in the United States by Programming Logic Systems; *Personal Prolog* from Optimized System Software; and *Prolog/m* from Chalcedony Software.

The chart provides my evaluations of these products as they are compared to one another and to what should be expected of a solid Prolog implementation in the richness of the Mac environment.

AAIS PROLOG

This Prolog is the fastest of the four somewhat standard Prologs that were put through their timing paces. It is also chock full of excellent debugging facilities and adheres closely to the Edinburgh standard syntax (though it offers an alternative AAIS syntax with some advanced features). You will find that most of the examples in any popular book on Prolog will run without modification in *AAIS Prolog.*

Debugging is one of *AAIS Prolog*'s real strong suits. Not only is there

PROLOG — JUST THE BEGINNING

the usual complement of tracing, stepping and "spy points" (in effect, break points), there is also the ability to ignore certain commands (called goals or predicates in Prolog parlance) during the debugging cycle.

Error-handling is another aspect of *AAIS Prolog* which appears to be particularly well-done. For example, in most versions of the language, an attempt to redefine an existing predicate which is built into the language will result in an error. *AAIS Prolog* simply asks if you wish to redefine the predicate.

The only major weakness in *AAIS Prolog* is the documentation, which is sparse, dense and not always very clearly written. While this disadvantage becomes significant primarily when one is trying to learn Prolog, it is even something of a hindrance in working with the language after it has been mastered to some degree.

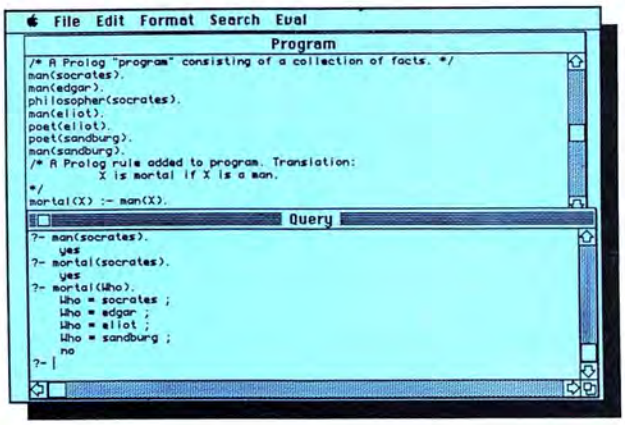
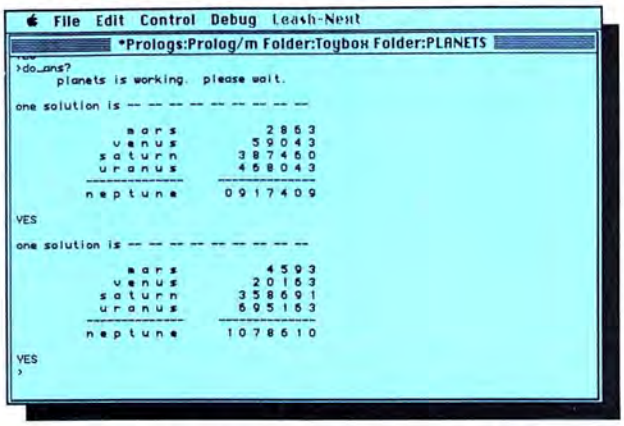


Fig. 1
Prolog's ability to draw inferences from facts that are not explicit in the program allows it to emulate human thought processes. This illustration shows a sample Prolog program with typical user interaction.



An add-on to *Prolog/m*, *Toybox* contains four puzzle programs which utilize Prolog's special abilities, so you can learn from someone else's code.

EXPERPROLOG II

ExperProlog II is ExperTelligence's implementation of the "new" *Prolog II* standard developed a couple of years ago in Marseilles by Prof. Alain Colmerauer and his associates. Colmerauer is the acknowledged "Father of Prolog" and when he declares that he has designed the "ultimate Prolog," the boast is not to be taken lightly. Most important among *ExperProlog II*'s enhancements over the earlier Edinburgh syntax are its ability to handle infinite trees, its "freeze" operator and its adaptability to modular program design.

Infinite trees are specialized data structures that arise when a Prolog predicate or rule statement tries to join (the Prolog term is "unify") two terms which share a common unknown variable. The result is an infinite loop which eventually causes the Mac to run out of memory and the predicate to fail. *ExperProlog II* permits the user to define a program or segment as containing infinite trees and handles them without overflowing memory. This feature will probably be most advantageous to those interested in using Prolog for natural language processing.

The "freeze" operator permits the user to define functions that will only be executed when all of the information they need is available. Because Prolog has built-in ability to infer and draw conclusions, this process of waiting until everything is known is not a normal part of the way Prolog works. The feature comes in quite handy when we want to define a predicate to work only in a specific way and when it only has certain of its arguments "known."

ExperProlog II uses the concept of "worlds" to permit the modular development and debugging of programs. This concept enables the designer to break a task into smaller sub-tasks more easily than with other implementations of the language.

Because *Prolog II*'s syntax is radically different from the "older" Prologs, Timing tests were not run on it. Timing without some measure of standardization among the products being tested is not very useful. From what casual timings were run, however, it appears *ExperProlog II* will fall near the middle of the speed spectrum.

Among the Prologs reviewed for this article, *ExperProlog II* is the most expensive, nearly twice as pricey as its nearest competitor. It does have some advantages over the other ver-

COMING INTO ITS OWN

"Artifical intelligence is an emerging market that can drive the sale of the Macintosh. In its lifecycle, I think that AI is where desktop publishing was in 1984." That's how Apple's Guy Kawaski describes his views of the field of which Prolog is so important a part.

"To continue the metaphor," he says, "we worked hard in 1984 to make sure that languages and tools like C and Pascal were available for the Alduses and Manhattan Graphics of the world. Now we are doing the same thing to ensure that languages like Prolog and LISP are available for the AI community. Sprinkle a few seed, add water, and presto!"

"Like desktop publishing, AI offers a way to radically differentiate the Macintosh from other personal computers," Kawasaki concludes.

sions of the language, but whether these advantages truly justify the higher price tag is at least debatable.

Besides the price issue, there are two other down sides to *ExperProlog II*. First, like *AAIS Prolog,* its documentation is not very good. It is better and more complete than *AAIS Prolog*'s, but it is often confusing and the user's manual to the Mac implementation does not have an index. The product is shipped with a copy of the book *Prolog* by four members of Colmerauer's team in Marseilles on the Prolog II project. It is dense in the early going and not a particularly good book from which to learn Prolog. Second, its Mac interface is non-standard, leading to a great deal of potential user confusion. For example, one does not **Load** a file into *ExperProlog II*. Instead, one **Inserts** a file into the World window. This is further complicated by the fact that when *ExperProlog II* first comes up, it does not put the user in a position to begin immediately entering or editing information. A separate window must be opened. This can be quite frustrating until you become accustomed to this different interface environment.

RATING THE PROLOGS (Scale of 1=Poor to 5=Excellent)

	AAIS Prolog	Exper Prolog II	LPA MacProlog	Personal Prolog	Prolog/m
Ease of Use	4.3	3	2.7	4.7	4.7
Execution Speed	4.7	(A)	3	3	4.3
Follows Mac Interface	5	3	3	4	2.7
Follows Prolog Standards	5	2.7 (B)	5	4	5
Richness of Built-Ins	5	5	5+	5	4.7 (C)
Documentation	2	3	2.7	4.3	3.7
Error-Handling	4.7	4	1.7	5	5
Toolbox Access	NA	4.3	5	3	NA
Graphics	NA (D)	5	NA	5	NA
Editing	4	4	4.7	3	2 (E)

NOTES:

A. Time trials not conducted because of radical syntax differences between Prolog II and other versions.

B. Follows Prolog II standard very well. Prolog II is *not* compatible with Edinburgh syntax. A translator program is planned and will be available around the time this review is published.

C. Rating assumes the $29.95 Toolbox access is being used.

D. Free graphics upgrade is promised. Scheduled to be available by the end of 1986.

E. All editing and printing must be done outside *Prolog/m*.

LPA MACPROLOG

Flexibility is the keyword in *LPA MacProlog,* developed in England by some of the earliest adopters of Prolog and recently adapted to the Mac. Several major syntaxes of Prolog are supported and can be interchanged dynamically with some limitations. Even more impressive, users can define their own syntax to some degree, which makes for a very rich programming environment.

Although *LPA MacProlog* falls near the low end of the speed range in its interpreted form, an optional Optimizing Compiler speeds execution noticeably. If you are going to be using *LPA MacProlog* for serious development, you will definitely want the compiler. If it were not for its very serious implementation flaws, *LPA MacProlog* would be the choice as a powerful development tool for Mac Prolog designers.

Unfortunately, the product is flawed by a combination of overly complex implementation and documentation which is often difficult to follow. For example, I encountered a situation where simple menu choices caused the system to go into an endless series of error dialog boxes from which the only escape was a hard machine reset. After several transoceanic conversations and letters, the problem turned out to be the loading of a specific file at an inappropriate point. The documentation, however, was ambiguous on this matter and it's a mistake many Prolog neophytes and veterans may well make. Where error dialog boxes *do* appear and go away as desired, they often fail to redraw the text they covered up, resulting in obliterated program listings.

In addition, the documentation is dense, unindexed and quite confusing. It intermixes all the syntax types in such a way that you practically have to know the answer before looking it up in the manual.

The net result is that I cannot recommend *LPA MacProlog* in its present form, though the product shows great promise if its publishers can get the problems cleaned up and improve the documentation.

PERSONAL PROLOG

Positioned at the low end of the price range, *Personal Prolog* is aimed squarely at those people who want the low price and ease of learning of *Turbo Prolog* but who prefer the Mac environment. This Prolog is easily the best documented of the lot; in fact, it's one of the best-documented programming languages I've seen for the Mac yet, including a well-conceived and well-written tutorial. This, coupled with the program's clean design and strong adherence to the Mac interface standard, makes this a solid choice for people who want to learn Prolog on the Mac.

Personal Prolog is the slowest of those tested, but for the most part it is not unacceptably slow, particularly for people who are just starting out. Interestingly, it is also one of only two of these products (the other being *AAIS Prolog*) which manages memory well enough to be able to handle a relatively large recursive task. All three of the others ran out of memory on a 512K Mac trying to solve the famous Towers of Hanoi puzzle with 10 rings. That's a standard test program for AI languages.

The only major lack in *Personal Prolog* is in the area of debugging. It has virtually no debugging tools at all, although it will permit the user to turn the printer on during program execution and thus get a hard-copy transcript. This missing component is only slightly aggravating to the student of Prolog; to the

PROLOG — JUST THE BEGINNING

RECOMMENDED READING

Here are some books I recommend to people who ask me, "Where can I learn more about this Prolog?"

Primers

Bharath, Ramachandran, *An Introduction to Prolog* (1986), Blue Ridge Summit, PA: Tab Books.

Clocksin, W. F. and C. S. Mellish, *Programming in Prolog* (2nd edition, 1984), New York: Springer-Verlag.

Shafer, Dan, *Turbo Prolog Primer* (1986), Indianapolis, IN: Howard W. Sams & Co.

Advanced Books

Bratko, Ivan, *Prolog Programming for Artificial Intelligence* (1986), New York: Addison-Wesley.

Burnham, W. D. and A. R. Hall, *Prolog Programming and Applications* (1985), New York: John Wiley & Sons.

Kluzniak, Feliks and Stansilaw Szpakowicz, *Prolog for Programmers* (1985), Orlando, FL: Academic Press.

serious developer, it is a major difficulty. There is another minor but aggravating omission, as well. Search and replace functions are not available, which means that program editing is severely limited.

PROLOG/M

Chalcedony Software's entry to the Mac Prolog market is solid, works generally well and adheres closely to the Edinburgh standard. In addition, it has an IBM PC counterpart, *Prolog/i,* which permits the porting of applications between the two systems with great reliability. *Prolog/m* also features extensive and easy-to-use debugging facilities.

While the built-in predicates which come with *Prolog/m* are certainly adequate, a serious exploration of the language will be easier with the purchase of the separately available *Toolbox* program disk from Chalcedony. This $29.95 disk contains 58 predicates which are normally not available in Prolog but which the user will generally build as needed. The disk contains the complete source code for all of these predicates, which makes it valuable not only as a utility tool but also as a learning device.

Chalcedony offers two other add-on items as part of its growing library of Prolog products. The $29.95 *Toybox* contains four game/-puzzle programs. The $49.95 *NFL X-pert* is an expert system written in *Prolog/i* which forecasts the outcome of professional football games with uncanny accuracy (depending to some degree, of course, on how knowledgeable the user is).

The only serious drawback of *Prolog/m* is the fact that it does not incorporate any true program editing or printing facilities. The assumption is that you will use your favorite word processor or editor to write and print the code and simply load it into *Prolog/m* to run it. This is consistent with *Prolog/m*'s IBM counterpart, but an unfortunate design decision on the Mac.

GRAPHICS IN PROLOG

Interestingly enough, only the highest-priced (*ExperProlog II*) and the lowest-priced (*Personal Prolog*) implement QuickDraw graphics in their first release. AAIS promises that buyers of its program prior to November 1986 will receive a free graphic toolbox upgrade within a few weeks after purchase. After November, these features will be built into the program, but we did not have the opportunity of testing them.

LPA MacProlog implements windows, dialog boxes and mouse control quite powerfully. Both *AAIS Prolog* and *Personal Prolog* offer subsets of these features.

RECOMMENDATIONS

If you are only interested in a low-cost way to explore Prolog and have no plans to do serious program development on the Mac in this powerful and elegant language, then *Personal Prolog* is your best buy, followed closely by *Prolog/m.*

On the other hand, if you know you're going to be doing serious program development at some point down the road and are willing to invest a fair amount of time and energy learning the language, *AAIS Prolog* is your best bet, followed somewhat distantly by *Prolog/m.*

Should you be interested in natural language processing applications or if you need some of the other features of Prolog II, then you will want to look at *ExperProlog II* closely.

DAN SHAFER IS A WELL KNOWN AUTHOR OF COMPUTER BOOKS. HIS MOST RECENT IS TURBO PROLOG PRIMER.

AAIS PROLOG

Overall Rating ★★★★

List Price: $150. Published by Advanced AI Systems, PO Box 39-0360, Mountain View, CA 94039-0360. (415) 961-1121. Not copy protected.

EXPERPROLOG II

Overall Rating ★★★

List Price: $495. Published by ExperTelligence, 559 San Ysidro Boulevard, Santa Barbara, CA 93108. (805) 969-7874. Not copy protected.

LPA MACPROLOG

Overall Rating ★★

List Price: $295. Optimizing compiler ($100 extra) recommended. Published by Programming Logic Systems, 31 Crescent Dr., Milford, CT 06460. (203) 877-7988. Not copy protected.

PERSONAL PROLOG

Overall Rating ★★★★

List Price: $64.95. Published by Optimized Systems Software, 1221 B Kentwood Avenue, San Jose, CA 95129. (408) 446-3099. Not copy protected.

PPROLOG/M

Overall Rating ★★★★

List Price: $99.95; Toolbox accessory, $29.95. Chalcedony Software, 5580 LaJolla Blvd., Suite 126, LaJolla, CA 92037. (619) 483-8513. Not copy protected.

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21 Up to 50 fields per file
22 Multiple indexes per file
23 File Dump allows for printing of contents of specific fields
24 Date created and last modified tracked for every record
25 All System Manager functions work with your own data files
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27 Create new Financial Statements
28 Print Statements at any time during the month
29 Have as many different statements as you like
30 Both comparative and standard statements
31 Compare against either last year or a budget
32 Have as many different budgets as you wish
33 Print statements for a specific department
34 Or print statements for a range of departments
35 Standard, recurring and accrual-type journals
36 Post journals to previous closed months in same year
37 Post journals to next month even if current month is open
38 Year-end audit adjustments
39 Allocate balance in one account to other accounts automatically
40 Allocate either as a fixed amount or on a percentage basis
41 Complete General Ledger Trial Balance reports
42 Inquire into all transactions for a specific account
43 Inquire into the balances of any account
44 Define multiple profit centers besides multiple departments
45 Inquire into account transaction for entire year
46 No limits on number of accounts, departments, budgets, etc.
47 Accounts can be declared inactive to stop future use
48 Account numbers can be alpha or numeric
49 Delivered with predefined chart of accounts and statements
50 Complete pre-closing month-end reconciliation
51 Customize your own check forms
52 Delivered with predefined check form
53 Unlimited number of check forms allowed
54 Unlimited number of banks and checking accounts allowed
55 Complete bank statement reconciliation
56 Complete processing of stop payments
57 Void a single check or a range of checks
58 Inquire into a specific vendor or range of vendors
59 Complete check generation
60 Also, posting of handwritten checks
61 Miscellaneous cash disbursements
62 Vendor and voucher info available by just pointing and clicking
63 Complete voucher entry
64 Unlimited number of terms codes
65 Complete debit-memo processing
66 Multiple payments allowed
67 Complete discount handling and calculating
68 Both Aging and Past Due Reports
69 Custom aging periods
70 1099 Form Reporting
71 Project Cost Reporting
72 Complete cash requirements reporting
73 Both standard and recurring vouchers allowed
74 Unlimited number of vendors, transactions, etc.
75 Complete month-end processing
76 All modules run under one program
77 Specifically written for the Macintosh
78 All functions operate in separate windows
79 Multiple windows may be on the screen at one time
80 All open windows appear in the windows menu
81 Works with all standard desk accessories
82 All modules and functions are separate icons on disk
83 Full cut, copy and paste capabilities
84 Data from your own files may be transferred into General Ledger
85 Defaults can be set up in a parameter file
86 All screens are clear and easy to understand
87 All functions follow consistent formats
88 All customizable features are delivered predefined for easy startup
89 Customizing instructions in documentation
90 Supports both ImageWriters and LaserWriter
91 All modules sold separately, so you only buy what you need
92 All modules run independently with the System Manager or integrated
93 Runs on Macintosh 512k, Macintosh XL and Macintosh Plus
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DIPPING INTO dBASE

dBase Mac may realize the fondest dreams of developers and power users — if they can ever get their hands on a copy.

[THIS IS NOT A PRODUCT REVIEW.]

With any luck, by the time you read this Ashton-Tate should have finally released its Macintosh data base product, *dBASE Mac*. When this item was written (early December 1986), there was not yet a beta version stable enough to base a full review on. But we thought you'd like a taste of what's in store. A more detailed look will follow as soon as possible.

dBASE Mac expands on the standard Macintosh interface to provide more "click-of-the-mouse" power than is available in any other data base product on the market. Creating and modifying file structures is a breeze. One of the most welcome enhancements is the ability to add pop-up menus, radio buttons and check boxes as data fields to your entry screens. It is as easy to create these fields as it is to create a text or numeric field.

It is equally easy to establish true relational links among several files. The relational aspect of the system has been handled so smoothly that when you have learned to handle single files, you have learned most of what you need to know in order to handle multiple related files as well.

dBASE Mac lets you build entry screens on which fields from different files can sit comfortably side by side, and all related files are automatically updated when data is entered or modified. Likewise, reports requiring data from multiple files can be created as easily as reports from single files. You will find that if you stay with the default setups Ashton-Tate has provided, you can create files, entry screens and reports with very little effort.

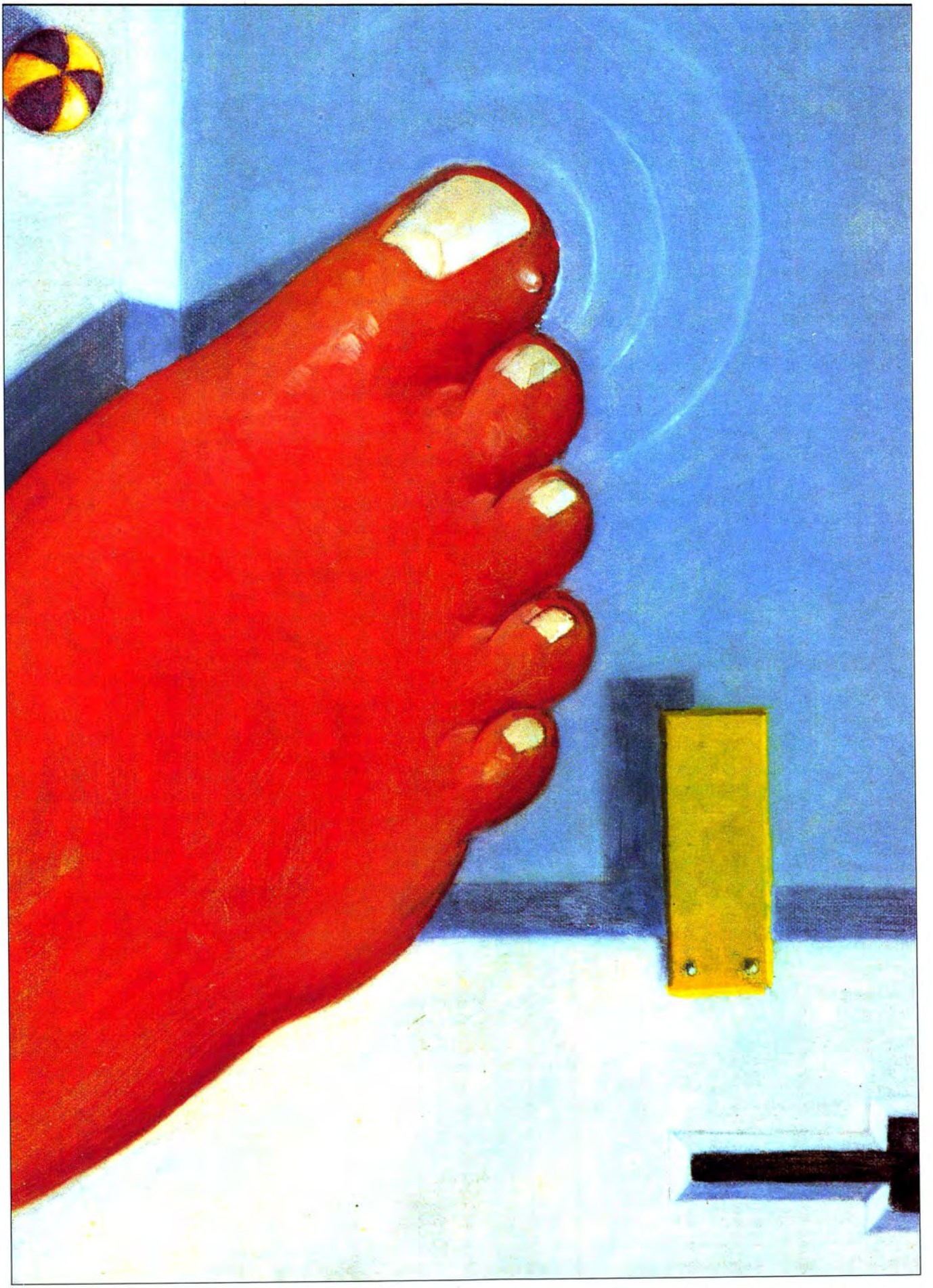
Beyond this "non-procedural" interface, there is also a powerful "procedural" language that developers and serious power users will have a field day with. It includes facilities for creating custom dialog boxes, alerts, menus and command palette icons. The command palette, a single-click alternative to menus or command keys, is context sensitive (it changes depending on what you're doing.) The standard palette selections duplicate the most commonly used menu commands, but they can be modified to execute whatever commands you would like them to — including your own routines.

Having said all this, a word of caution is in order. This is a complex product. It lets you do a lot: much of it can be done easily and a lot of it can't. *dBASE Mac* is not a simple filing system. If you approach it as one you will quickly get frustrated. Rather it is a full-featured relational data base management system.

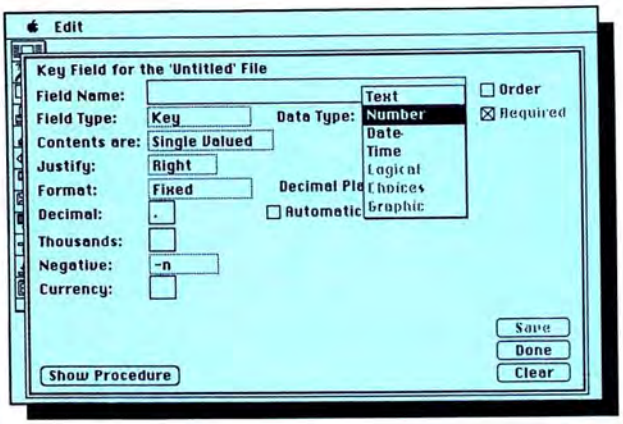
That is not just a set of buzzwords. Ashton-Tate has made a serious effort to give the user the functional power of a programmable relational data base with a Macintosh front end — no easy task. If you intend to go beyond the most basic functions, deciding for instance that you want to create custom screens and reports, employ sophisticated error checking, have one screen (known as a "view" in *dBASE Mac* parlance) call another, etc., you are going to have to make a commitment to some hard learning. As I said, developers will love it. It remains to be seen how end users will react.

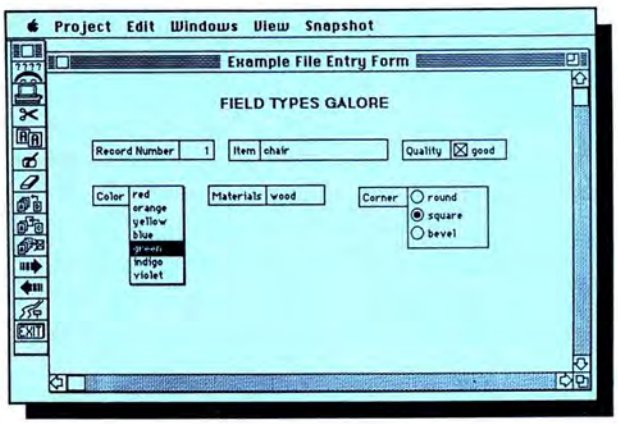
I have three major complaints so far with *dBASE Mac*. Number one: I think Ashton-Tate made some errors in deciding which functions were going to be part of the "click-and-easy" interface, and which ones would require programming. For example, you have to write a procedure simply to count the records in a file. No big deal, you say. But because of the way *dBASE Mac* is structured — it is actually based on object-oriented programming — fig-

BY HENRY BORTMAN

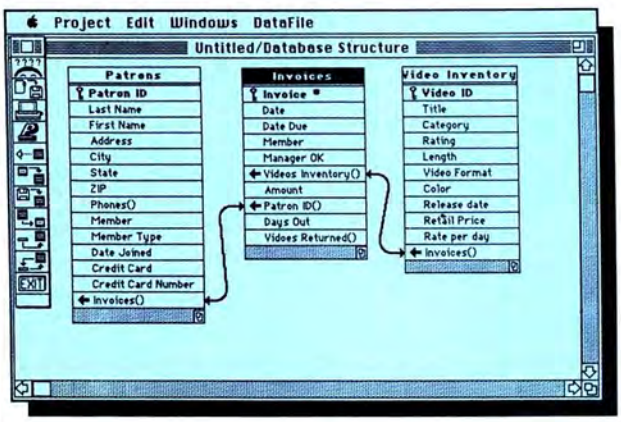


DIPPING INTO dBASE

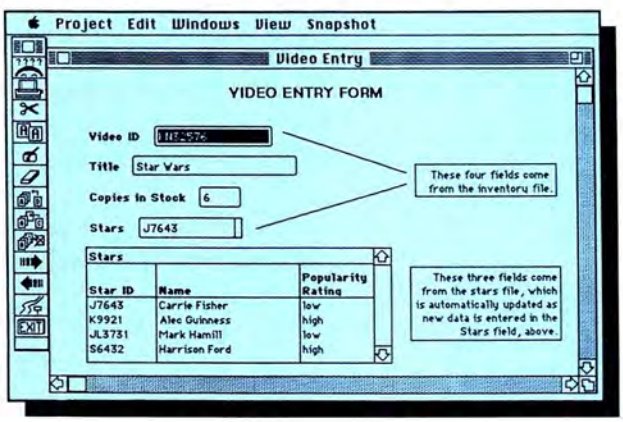




dBase Mac **allows the user to create radio buttons, check boxes and pop-up fields as well as the standard text, number, date and graphic fields, common in other Mac data bases. (A) The field definition screen. (B) An entry form using several different field types.**



Relationships between data base files are easily created in the Structure window by dragging from a field in one file to a field in another file.



dBase Mac **provides the unique ability to create data entry screen using fields from multiple linked files.**

uring out exactly how to do it is not as simple as it might seem. There is no dot prompt here, where you can just type a simple command like "count" and be done with it.

Number two: As mentioned above, data is accessed via views. Every screen or report is a separate view. Every time a view is accessed for the first time in a work session, or a view is modified, *dBASE Mac* must read through the entire data base, one record at a time, before displaying or printing any data. With large files, that's a lot of waiting. According to Ashton-Tate, this was done to ensure data integrity, but it unfortunately also ensures end user ennui.

Number three: As usual with Ashton-Tate, the product comes with reams — well, really only one ream — of documentation; but it's a mixed blessing. The "Learning" manual, which covers the basics, is well done. But there is next to nothing about the hows and whys of the rich procedural language wherein much of the power of the program lies. (Ashton-Tate is promising a free set of four sample applications, together with additional documentation, for those who return their registration cards, but as of this writing these were not available.) Nor is there an adequate explanation of how to convert from a *dBASE III* system to a *dBASE Mac* system. This is a particularly serious omission because — PC users, beware! — only *dBASE II/III/III+ data* files are compatible with *dBASE Mac*. All *programming* functions have to be rebuilt from the ground up.

Before you go out and buy this one — particularly if you are not an experienced data base user — think seriously about what you want to accomplish with a data base system, both now and in the future. Consider also, particularly if you're going to set up your data base system yourself, whether you are willing to put in the energy required to master a complex product in order to enjoy the benefits of its power.

HENRY BORTMAN IS A SAN FRANCISCO-BASED FREELANCE WRITER AND AN ENGINEER WITH US SPRINT.

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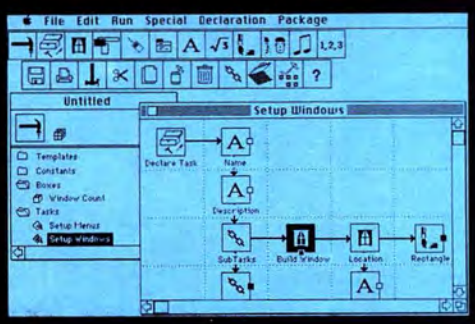

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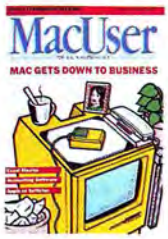

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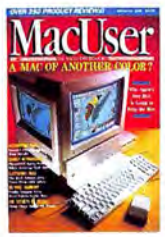

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TIP SHEET

Found a trick, shortcut or smarter way to get something done with a program? Share your hints (and maybe make a few bucks) by sending them to The Tip Sheet, c/o MacUser, 25 West 39th St., New York, NY 10018. We pay at least $25 for every hint we publish, plus we'll print your name and hometown (so you get all local bragging rights).

compiled by David Schargel

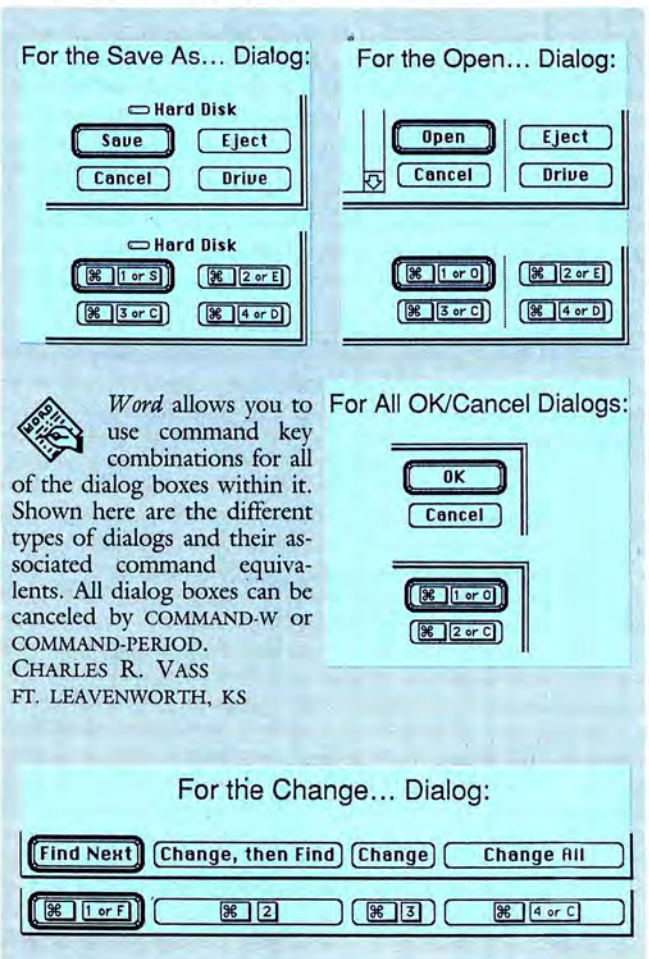
WORD

Microsoft Word (version 1.0X) allows a number of commands to be aborted within *Word* using the COMMAND-PERIOD combination. Most people already know that this command sequence will abort printing, but Find, Change and Repagination can also be aborted. This tip can save you a lot of time if you incorrectly choose a menu item.
SUSAN HELGESON
HOUSTON, TX

An undocumented feature of *Word*, version 1.05, gives you the ability to select characters with the new keypad. Using the new keypad (the one built into the keyboard), hitting the asterisk(*) will select the character to the right of the insertion point (or if some text is already selected, the selection will be extended one character to the right). The plus key(+) will do the same, but to the left, instead of right.

You may hold down these keys for extending the selection very quickly.
OWEN SCHMIDT
PORTLAND, OR

Within *Word*, choosing Superscript or Subscript from the menu will result in a smaller font being used and then it will be Super/Subscripted. However, choosing Superscript or Subscript from Format under the Character menu will not automatically change the font size.
DAVID WILCOX
CHICAGO, IL



Word allows you to use command key combinations for all of the dialog boxes within it. Shown here are the different types of dialogs and their associated command equivalents. All dialog boxes can be canceled by COMMAND-W or COMMAND-PERIOD.
CHARLES R. VASS
FT. LEAVENWORTH, KS

FILEMAKER PLUS

This tip won't make you a better user, but it might just produce a quick laugh. Hold down Shift and Option while choosing "About FileMaker Plus..." from the Apple menu for some humorous credits from the authors of *FileMaker Plus*.
PAUL FRIEDMAN
SARASOTA, FL

OVERVUE

You can preview an *OverVUE* report by first saving the report to disk, and then opening it with a desk accessory text processor (such as *MockWrite* or *miniWriter*). Not only can you see and print your report, but you can even make changes without going back to *OverVUE*.
BETTY MCCARTHY
CHICAGO, IL

EXCEL

Instead of having to go to the menu each time to select INSERT (to insert a new row or column), you can hold down the Option key and click on the row or column where you wish for the new one to be added.
ED HOLLINGSWORTH
WARMINSTER, PA

ANCIENT ART OF WAR

This program does not allow you to get a screen dump by using (the usual) COMMAND-SHIFT-3. However, COMMAND-ENTER will take a screen snapshot just the same as COMMAND-SHIFT-3 does. You can then take that screen snapshot and edit it with any paint application.
MATTHEW SMITH
MEMPHIS, TN

SUPERPAINT

You can get a very interesting "spattering" effect within *SuperPaint*. First, choose the paintbrush pattern that you wish to spatter. Then select the spraycan tool and, while painting, hold down the Option key. The faster you move the mouse, the further apart the spattering will occur.
DAVID BIEDNY
BROOKLYN, NY

LASERWRITER

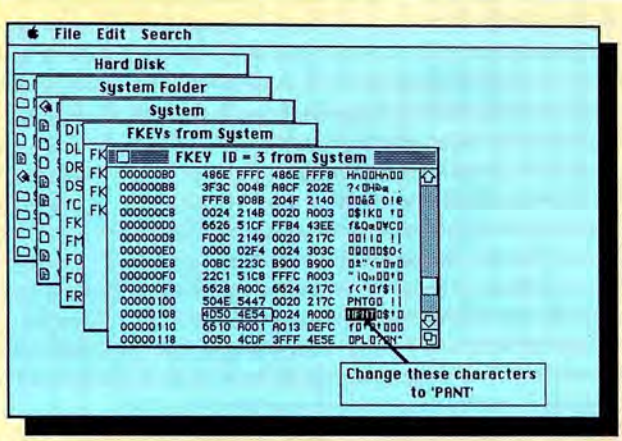
A good way to avoid getting envelopes stuck in the LaserWriter while manually feeding them, is to place a little down-curve onto the envelope. This is most easily done by drawing the envelope over the edge of a desk or table. It also helps to run a fingernail along the upper edge to make the envelope flatter and smoother.
OWEN SCHMIDT
PORTLAND, OR

SLEEP DA

The public domain *Sleep* desk accessory, when in use, can be temporarily deactivated by merely holding down the Option key. The screen will be in full view until the Option key is released.
RICHARD BACKUS
SAN FRANCISCO, CA

SMARTCOM II

If you PASTE material from the Clipboard (as opposed to SENDing a file), *Smartcom II* will use a text protocol, even if MacBinary or Hayes Verification protocol is selected.
CAROL MYERS
GOOSE CREEK, SC



SYSTEM

The screen dumps created using COMMAND-SHIFT-3 are placed onto your disk as *MacPaint* files. If you are using *FullPaint,* which uses the same file format as *MacPaint,* you will find that you cannot open up your screen dumps directly from the *Finder.* The following modification to the *System* file corrects this "problem."

Use *ResEdit* and open up your *System* file. Within the *System* file, open up FKEY 3. Find (on the right, or ASCII side) the characters MPNT. Change these characters to PANT and close and save the *System* file.

From then on, all of your screen snapshots will, when opened from the desktop, enter directly into *FullPaint.*

Always remember to work on a backup of your *System* file!!

MICHAEL COREN
DRESHER, PA

MINIWRITER DA

To get past the opening screen via the keyboard, hit COMMAND-N while the DA is loading. This will start you with a blank document.

You can also hit COMMAND-O (for Open) while the DA is loading to access other text-only docs. This will open the standard file selection dialog box.

TOM DEFAZIO
NEW YORK, NY

miniWriter always defaults into certain settings that can then be changed by using choosing Options in the *miniWriter* menu. It is possible for you to customize the default settings in *miniWriter* to your own liking. You have to know *ResEdit* in order to do this.

Using *ResEdit:*

- Open the original *miniWriter* DA (standard DA Icon). Do not open the DA within the *System* file.
- Copy the TMPL resource you find there and Paste it into the TMPL resources of a copy of *ResEdit (ResEdit* uses these to tailor the way you view the resources of various applications and the author was thoughtful enough to provide a template for editing *miniWriter*'s default settings).
- Next, using the modified *ResEdit,* (by quitting and re-entering) open the mWRT resource in *miniWriter,* scroll down to the various default options; e.g., Smart Quotes and set them according to your needs (0 = off, 1 = on).

TOM DEFAZIO
NEW YORK, NY

DASCH RAMDISK

Have an DASCH external RAMdisk connected to a 512K Mac with the old ROMs? Want to keep the RAMdisk organized under the MFS file system, without giving up the capability to use HFS? There's a way. A Mac with the old ROMs and no hard disk can only be booted from an MFS floppy, but if the *Hard Disk 20* file is on the boot floppy, it will try to initialize any disk 800K or larger (including an external RAMdisk) as HFS. In the case of the DASCH external RAMdisk, this means that you lose the folder information as files are copied from MFS floppies to the HFS DASCH during the bootup procedure. Bummer. Solution?

Keep the *Hard Disk 20* file off your initial boot floppy; then the Mac doesn't know about HFS at bootup and initializes the external RAMdisk as MFS, faithfully keeping track of all the folder information as it loads up the RAMdisk. Then, after you've filled the RAMdisk with everything you want from MFS floppies, push the programmers reset switch (which doesn't affect the external RAMdisk), and reboot with a different floppy that has whatever you need to boot up the Mac and recognize the external RAMdisk, plus the *Hard Disk 20.* Since the RAMdisk is already up and loaded, no more file copying needs to occur, and the HFS file system automatically gets loaded into memory (not onto the RAMdisk) and is available until the next shutdown, reset, or system crash. You can read or create HFS floppies to your heart's content.

DAN HENDERSON
HOUSTON, TX

DISKS

It is sometimes possible to clear up some space on a work disk (that is used a lot) by using the *Finder* and copying the disk to another one. This sometimes frees up the fragmentation of the files on the disk, and will hopefully produce more disk space for you to use.

PAUL RINGSMITH
WAITE PARK, MN

READYSETGO

If you need to bring heavily formatted and tabbed information into *ReadySetGo* 2.1, use a screen-to-Clipboard accessory like the *Clippy* FKEY or the *Quick Grab* DA (Quick & Dirty Utilities, Vol. 2) and bring in your information as a picture or series of pictures (bitmaps of your word processor screen.) Matching the *MacWrite* ruler with *ReadySetGo*'s block layout in a *Switcher* combination makes this very easy. Note that any correcting will have to be done in *MacWrite* and reimported. This process also works with *ThinkTank 512,* and should work with any program that accepts Clipboard graphics.

MICHAEL R. TOLLEFSON
HANAHAN, SC

MACWRITE

If you need to leave a space of a given size (for example, a 3-inch space after a test question in which the student can write a response), when using *MacWrite,* don't fool around with with counting how many times to press Return. Instead, draw a line in *MacDraw* of the desired height, make it invisible (by either selecting the dashed line on the Lines menu or NONE on the Pen menu), copy it, and paste continually it into the appropriate place in your *MacWrite* document.

TOM ROCKLIN
IOWA CITY, IA

An easy way to get larger top and bottom margins in your *MacWrite* document, choose Open Header for the top margin (or Open Footer for the bottom) and insert a few blank lines. You will find that *MacWrite* will now hold the top and/or bottom margins while you go ahead and type or edit.

K. KIRSTEN MCDONALD
CHAPEL HILL, NC

DISK LIBRARIAN

If you do not want the public domain *Disk Librarian* to process all mounted volumes as soon as it's launched (very frustrating if you have a hard disk), hold down the mouse button until you hear a beep.

GARY ARON
SAN MARCOS, TX

IMAGEWRITER II

If you are running into problems with smudging while printing, you might find you can correct the problem in one of three ways.

The first thing to try is the paper thickness lever as mentioned in the ImageWriter II Owners Manual. It is possible that the print head (and therefore the ribbon) is simply too close to the platen (and, of course, the paper).

If that doesn't help, it is possible that the print head has a buildup of gunk. The print head is removed by pulling upwards on the print head while moving the white print head holder to the right. It is possible that you may have to shift the print head from side to side to get it out. Clean the print head using alcohol and a Q-tip. Be very careful re-inserting the print head making sure it is placed straight into its slot.

If that doesn't correct anything, there is a possibility that the Paper Guide is either dirty or broken. The Paper Guide is the plastic piece that wraps partially around the platen, surrounding the print head. To remove this piece, first remove the print head and then use a small Phillips head screwdriver to remove the two screws holding in the Paper Guide. After removing the Paper Guide, check that the metal attachment is not cracked or ripped. If it is, you need a new Paper Guide (available at Apple dealers for around $10). Cleaning the Paper Guide, however, may just do the trick. Again, use alcohol with a Q-tip for best results. Placing the Paper Guide back into the printer must be done perfectly. Feed three sheets of paper into the printer and then screw in the Paper Guide, pressing it against the paper.

If these tips fail, you may have to bring your printer into a dealer for repair.

LENNY SACHS
VALENCIA, CA

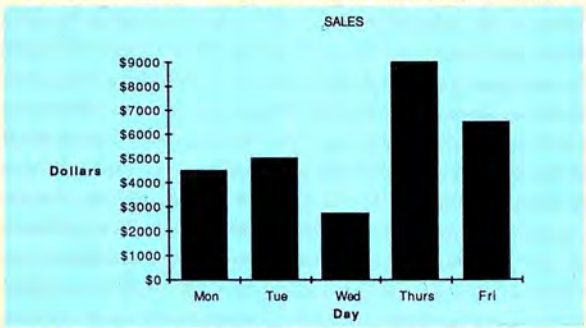
Push the white tab to the right as you gently rock the print head upwards.

Clean the pins on the print head using a Q-tip moistened with alcohol.

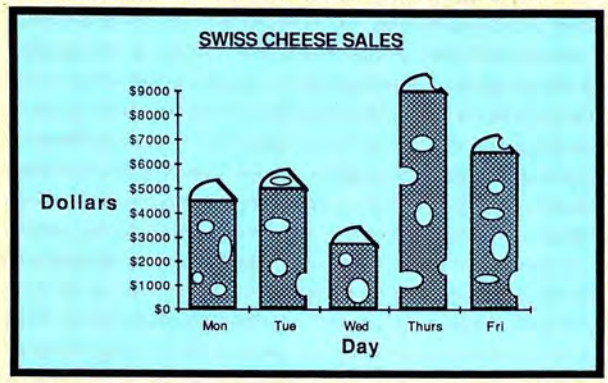
You must remove two screws in order to withdraw the Paper Guide.

FRANK LUSK

ORIGINAL GRAPH PASTED FROM MICROSOFT CHART



ENHANCED GRAPH CHANGED USING MACDRAW



MACDRAW

When a graph made in *Microsoft Chart* is cut and pasted into *MacDraw*, each piece of the chart is an individual *Draw* "object." A lot of touching up can be done to your document. Fonts can be changed, boxes or pie pieces can be stretched or given a shadow. You can be very inventive with your new chart.

SUE KNOPF
LA CROSSE, WI

TELECOMMUNICATIONS

If you're just getting started in telecommunications, or breaking in a new telecom program, there's no need to pay the expensive connect charges of the commercial services while you're learning how to upload and download. Contact your local Mac users' group, dealer or knowledgable friend, and get the phone number of one of your local free bulletin board systems. Practice uploading and downloading on the local board, where it should cost you nothing.

Local boards usually have lists of others in the area, and you might also find there a lot of the shareware and public domain stuff you would have paid to get from the national nets.

DAN HENDERSON
HOUSTON, TX

How often has line noise messed up your carefully programmed macro while running your favorite telecommunications program? This can get expensive if you're connected to a commercial network system and you've left to make a turkey sandwich. The problem is that when the system prompts you for your next command, it sees the line noise garbage characters that have accumulated since your last command in addition to whatever your macro sends it. The solution? Make the first character in each 'typing' command in your macro the control character that says to the network "ignore whatever I've typed so far." On CompuServe, it's a Control-U (often represented as ^U). If there was garbage on the line, this tells the service to ignore it; if there wasn't any, no harm done. It works!

DAN HENDERSON
HOUSTON, TX

Don't just sit there waiting for us to get around to your problem or question. Copies of the deluxe, spiral bound edition of *The Power User's Manual : Over 1,000 Hints and Tips for the Macintosh* are now available for a mere $19.95, which includes shipping and handling. The manual has two cross-referenced indexes to help find tips fast and covers over 100 of the most popular Mac programs and peripherals. It's worth its weight in gold mice, and just happens to be published by *MacUser* Make your check payable to MacUser Publications, Inc. and send the order to: Powers Users Manual Offer, *MacUser* Magazine, 25 West 39th St., New York, NY 10018. Bulk rates for clubs, organizations and schools are available from the same address. The manual is currently available only from *MacUser*.

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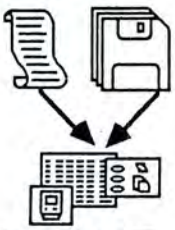

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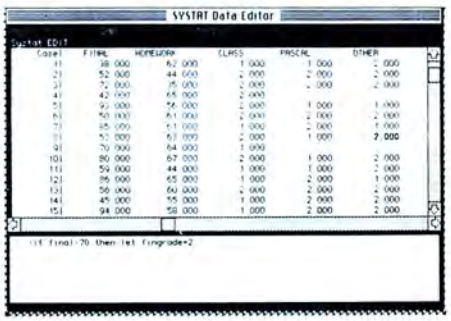

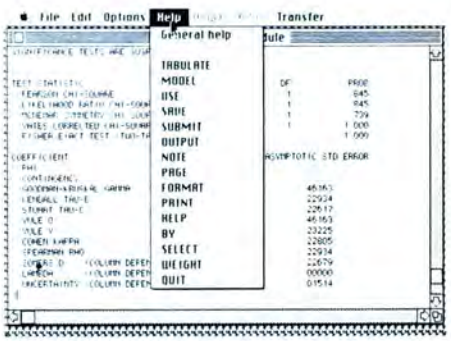

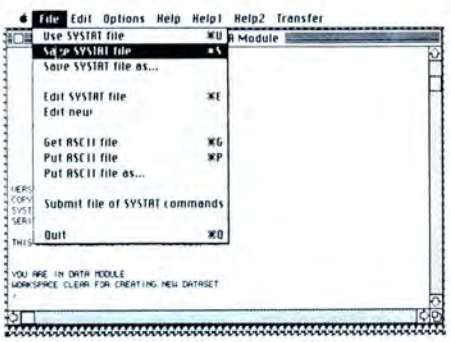

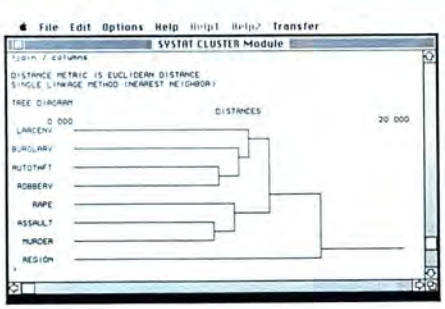

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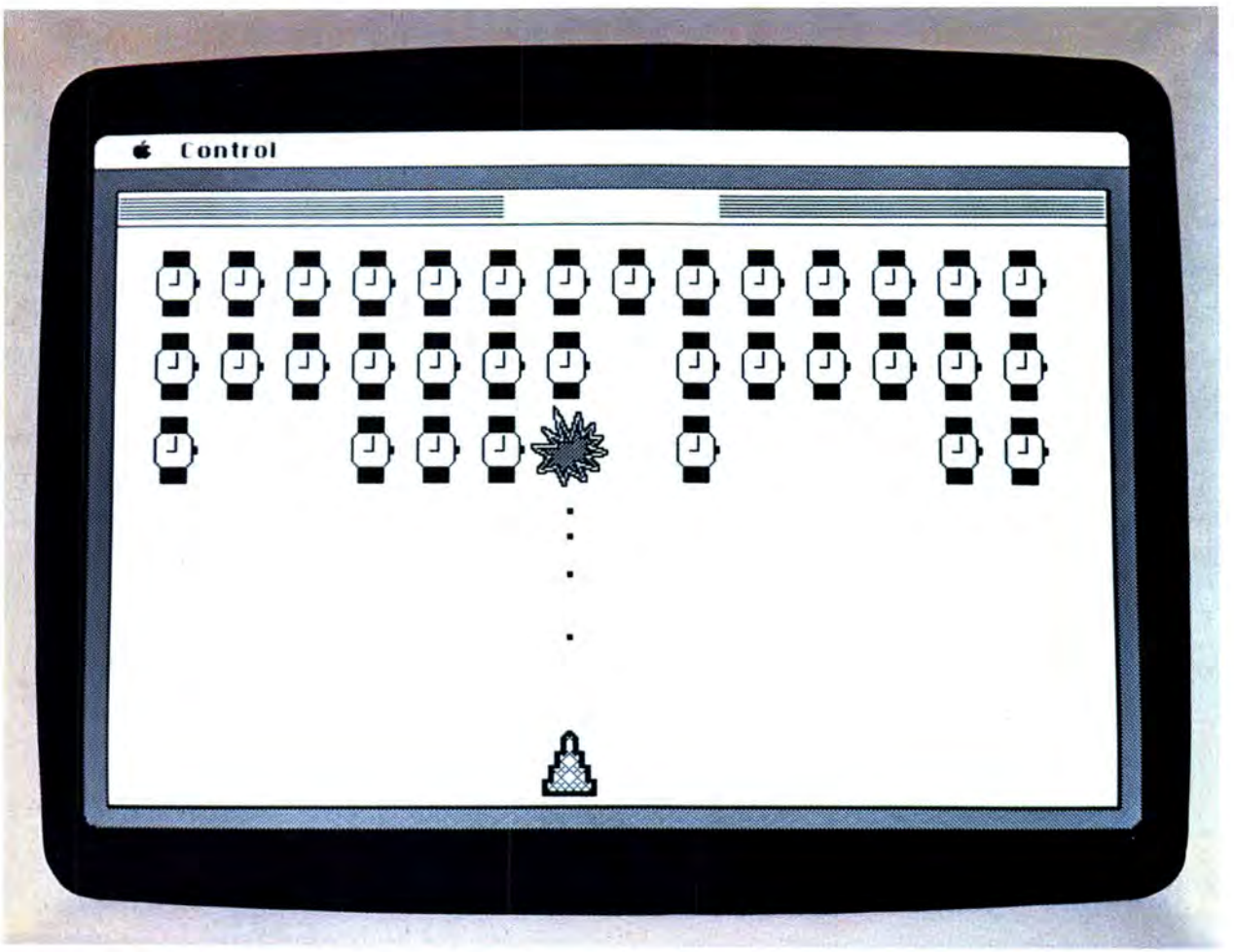

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by Dan Cochran

ANSWERS FROM THE MAC TEAM

Got a Mac problem? Something that you'd like explained? Something you can't find the answer for anywhere else? Apple's Dan Cochran will answer your questions every month in this space. When the questions are too tough for him, he'll get the answers from other members of the Mac team. So ask what you need to know and get your answers straight from the source!

Send your questions to Dan care of MacUser, *25 West 39th Street, New York City, NY 10018. Dan will read all of your questions, but, unfortunately, he may not be able to answer individual queries.*

IMAGEWRITER II PROBLEMS

I've received many letters describing ImageWriter II printing problems. All of the problems involve similar symptoms: one of the first few lines from a MacWrite *or* Microsoft Word *ImageWriter printout is compressed or "scrunched."*

Apple Technical Communications supplies the following answer and suggestions: This problem can often be reduced by raising the paper bail to the upper position. Most of this difficulty is mechanical, but it is actuated by the reverse line feeding the driver supplies. The paper can often catch on the paper bail and buckle when it is rolled backward and then forward at the beginning of each page. This moves the paper away from the platen. The print head will make a first pass. When the paper advances and the paper moves closer to the platen, the second pass to complete the line isn't positioned well relative to the first pass.

The reverse line feeding can be minimized by not having text too close to the top of the page. If the application knows that there is text there, it will tell the driver to ensure it is at the top of the page, which results in the reverse line feeds intended to reduce the slack in the paper. Lowering the top of the paper will result in moving the entire page of printed text lower which is an unacceptable solution.

This reverse line feeding action is in the 2.3 driver and isn't caused by a specific application. It often helps to start on the second page and to raise the paper bail. If the perforation falls under the paper bail when printing starts, the problem will almost always show up.

LINE UP MONOSPACED FONTS

Q. When I print to my LaserWriter from *MacDraw* using Courier font I find that the printed lines aren't always aligned correctly on the right, even if they are perfectly aligned on the screen.

For instance, I may have several lines on the screen that align perfectly:

MacUser is a great magazine
MacUser is a great magazine
MacUser is a great magazine

But when I print to the LaserWriter, the last line will not align properly:

....great magazine.
..great magazine.

Is there any workaround?

IRVING CARLSON
MUSKOGEE, OK

A. *I wasn't able to duplicate your problem but Apple's Technical Communications Group knew about your problem. Here's their answer:*

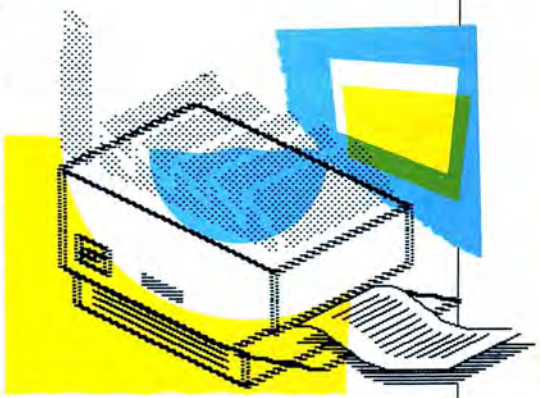
Courier is a monospaced, ROM-based font and MacDraw *needs to know where the text starts and ends in order to space Courier correctly. The beginning of a line is simple to find but the end must be defined by a Carriage Return. If a Carriage Return is inserted at the end of the last line, all lines align properly. In the event that this text will be placed over any pattern, the last Carriage Return will have to be hidden. This is accomplished by filling the text box with* NONE *from the Fill menu.*

USING THE WIDE CARRIAGE IMAGEWRITER

Q. Please tell me how I can fully utilize my 15-inch ImageWriter. I want to print *MacPaint* images 14 x 20 inches or 14 x 16 inches without having to mortice two or more pages together. Do I need a new printer driver? Is there an authoritative source for how to fully utilize this underappreciated device? My attempts to obtain information through local vendors have been unsuccessful.

DON JOHNSON
ORLANDO, FL

A. *The* ImageWriter *print drivers can already handle printing across perforations and printing nonstandard page sizes. However, most programs including* MacPaint, *don't take advantage of this capability. The limitations on printable page size are generally imposed by the application, not the printer or the printer drivers. Very few software packages take advantage of the ImageWriter 15 capabilities.*



GRAPHICS QUALITY ON THE LASERWRITER

Q. We just purchased a Macintosh Plus and the latest *FullPaint* graphics program. Anxious to test the near typesetting capabilities of the LaserWriter, we produced a wonderful text and graphics design in *FullPaint*. We then rushed to the nearest print shop and fed it into a LaserWriter. To our surprise and utter disappointment, the fonts produced were, well..."computerish." Where were those incredible, smooth and graceful fonts that just weeks before pushed us over the edge into computers and Macintosh land? It was suggested that we do the art work in *FullPaint* and import it into *MacDraw* to add the fonts since *MacDraw* apparently produces superior font output on the LaserWriter. But *MacDraw* is such a MacBear compared to such user friendly and manipulative programs as *MacPaint* and *FullPaint*.

How can we produce good font design in *FullPaint* alone? Why is *MacDraw* so much better at producing fonts through the LaserWriter?

TOM AND LORI RUBARTH
CHANDLER, AZ

A. *There is a major philosophical difference between "painting" programs like* MacPaint *and* FullPaint, *and "drawing" programs like* MacDraw. *The heart of this difference manifests itself in the way these two program families store and represent information.*

Both MacPaint *and* FullPaint *store the contents of their documents as compressed bit-maps. When you create a circle in* MacPaint *or type in some text from the keyboard,* MacPaint *does not remember that you've drawn a circle or that you've typed in some text. It only remembers the black dots which define the document you've created and their position within the document. So the Helvetica letter A is not stored as a character code, but rather as the*

ANDY MARTIN

sequence of dots which define that character in its screen representation.

MacDraw, *on the other hand, knows and cares little about bit-maps.* MacDraw *internally represents geometric graphics mathematically and represents text based on character codes, font, style, type and size. A circle is stored as a center point, with a radius and line width. Text is stored as a series of character codes.*

These different ways to store graphics and text are often referred to as "bit-mapped representation" (MacPaint)*, and "object-representation"* (MacDraw)*. If you wish to move a graphic or text from one place to another in a* MacPaint *document, you must use the Lasso to specify the bits of black dots you wish to move. With* MacDraw *you need only click and select the object you wish to move and then drag it to its new position within your document.*

There are many performance tradeoffs inherent in bit-mapped versus object representation of graphics and text. Bit-mapped representations can redraw themselves on the screen very quickly. All they need to do is throw the black dots up on the screen. Object-representations take more time to redraw. To put up an object representation of a circle the program must mathematically calculate all the points and dots which comprise the circle, and then draw them.

But bit-mapped representation requires much more memory than object representation. A MacPaint *document consisting of ten lines of text needs to remember all the dots necessary to redraw the text. An identical* MacDraw *document need only remember the character codes that correspond to each individual text character.* MacDraw *allows you to work with much larger document sizes than* MacPaint *because of this.*

Your printing problem represents yet another trade-off. The LaserWriter can print both graphics and text at a resolution of 300 dots per inch. The Macintosh screen displays graphics and text at 72 dots per inch. A MacPaint *or* FullPaint *document is only described at this lower screen resolution, and the resultant graphics output on the LaserWriter is restricted to the same lower-quality resolution.* MacDraw, *on the other hand, prints text by sending character codes to the LaserWriter and prints graphics by sending similar mathematical descriptions of circles, squares, arcs and lines. Thus the LaserWriter (or Linotronic) output from a* MacDraw *document is not limited by the screen resolution of the Macintosh but rather by the limitations of the printer.*

If you don't want to sacrifice the flexibility of painting type programs but want the higher quality output of MacDraw, *you might look at* SuperPaint *from Silicon Beach Software.* SuperPaint *has all of the features of* MacPaint *but also allows you to enter and print graphics and text as objects, just like* MacDraw. SuperPaint *also has a "LaserBits" feature that allows you to create 300 dot-per-inch bit-mapped graphics even within the limitations of the 72 dot-per-inch Macintosh display.*

WRONG DEFAULT FONT

Q. I've been experiencing a problem with my Mac 512K. I am running a stock Fat Mac with an external 400K drive and the latest *System* 3.2. The problem with *MacWrite* is that the default font comes up Monaco rather than Geneva. Other applications also have a similar problem. This has developed within the past 2 months; before that everything was fine.

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Here are just **some of the many important benefits** the Business Opportunity Seekers' Loans Manual provides you with:

- **a completely filled in sample set of actual SBA loan application forms, all properly filled in for you to easily follow—aids you in quickly preparing your own loan application the right way. Each line on the sample application forms is explained and illustrated in easy-to-understand language.**
- **fast application preparation procedures for getting loans for both new start up business ventures and established firms.**
- **advises you on how to properly answer key questions necessary for loan approval and in order to help avoid having your application turned down—gives you advice on what you should not do under any circumstances.**
- **what simple steps you take to guarantee eligibility—no matter if you do not presently qualify.**
- **where you can file your application for fastest processing.**

At this point the most important question you want answered is Just where is all this loan money coming from? Incredible as it may sound—these Guaranteed Loans, Direct Loans and Immediate Loans are indeed available right now — from the best and yet, the most overlooked and frequently the most ignored and sometimes outright ridiculed "made-fun-of" source of ready money fast capital in America — THE UNITED STATES GOVERNMENT

Of course there are those who upon hearing the words "UNITED STATES GOVERNMENT" will instantly freeze up and frown and say

"... *only minorities can get small business loan money from the government!*"

Yet on the other hand (and most puzzling) others will rant on and on and on that

"... *don't even try, it's just impossible — all those Business Loans Programs are strictly for the Chryslers, the Lockheeds, the big corporations, not for the little guy or small companies*" etc.

Still there are those who declare

"... *I need money right now...and small business government loans take too darn long. It's impossible to qualify. No one ever gets one of those loans.*"

Or you may hear these comments

"... *My accountant's junior assistant says he thinks it might be a waste of my time!*" "*Heck, there's too much worrisome paperwork and red tape to wade through.*"

Frankly — such rantings and ravings are just a lot of "bull" without any real basis — and only serve to clearly show that lack of knowledge ... misinformation ... and not quite fully understanding the UNITED STATES GOVERNMENT'S Small Business Administration's (SBA) Programs have unfortunately caused a lot of people to ignore what is without a doubt — not only the most important and generous source of financing for new business start ups and existing business expansions in this country — but of the entire world!

Now that you've heard the "bull" about the United States Government's SBA Loan Program — take a few more moments and read the following facts

- **Only 9.6% of approved loans were actually made to minorites last year**
- **What SBA recognizes as a "small business" actually applies to 97% of all the companies in the nation**
- **Red tape comes about only when the loan application is sent back due to applicant not providing the requested information...or providing the wrong information**
- **The SBA is required by Congress to provide a minimum dollar amount in business loans each fiscal year in order to lawfully comply with strict quotas. (Almost 5 billion this year)**

Yet, despite the millions who miss out — there are still literally thousands of ambitious **men and women nationwide** who are properly applying — being approved — and **obtaining sufficient funds** to either start a new business, a franchise, or buy out or expand an existing one. Mostly, they are all just typical Americans with no fancy titles, who used essentially the **same effective know-how** to fill out their applications that you'll find in the Business Opportunity Seekers' Loans Manual.

So don t you dare be shy about applying for and accepting these guaranteed and direct government loans. Curiously enough the government is actually very much interested in helping you start a business that will make a lot of money. It's to their advantage — the more money you make the more they stand to collect in taxes. In fiscal 1986, our nation's good old generous "uncle" will either lend directly or guarantee **billions of dollars** in loan requests, along with technical assistance and even sales procurement assistance. Remember, **if you don't** apply for these available SBA funds **somebody else certainly will.**

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Therefore, for those purchasing the manual by mail, no 3 day class, no course and accommodations are required. And rather than $450 we could slash the price all the way down to just a mere $20 — a small portion of a typical seminar attendance fee — providing you promptly fill in and mail coupon below with fee while this special "seminar-in-print" manual offer is still available by mail at this relatively low price!

Remember, this most unique manual quickly provides you with actual sample copies of SBA Loan application and all other required forms—already properly filled in for you to easily use as reliably accurate step-by-step guides—thus offering you complete assurance that your application will be properly prepared and thereby immediately putting you on the right road to obtaining fast no red-tape loan approval.

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My dealer suggested that I had been playing around inside the software and could have caused these problems. True, I do enjoy getting inside and finding out "what makes Johnny run," but never on my original program disks. They have never been altered in any way. Furthermore, all my software runs just fine on a friend's Mac with exactly the same configuration, and his software screws up when booted in my Mac. Is this a problem with hardware, software, firmware or should I have my eyes examined. Also, if the mother board needs replacing, would this be the right time for upgrading to a 512K Enhanced or Macintosh Plus?

ANDREW BACCHI
SHAFTSBURY, VT

A. *I think you can fix your problem by turning off your machine and removing the small battery from the back of your Macintosh. Keep the battery out for about 10 to 15 minutes and then replace it with a new one. Boot up your Macintosh, reset your clock and date from the control panel or alarm clock D/A and then boot up* MacWrite. *You should find that* MacWrite *is now back in Geneva default mode.*

"Why?" you ask. Various settings, such as time, date and the other things you set via the control panel, need to be preserved when the Macintosh is off so that they will be present next time the machine is booted. This information is stored in what is called parameter RAM, a few bytes of memory that are stored in the clock chip. This clock chip is powered by your battery when the Mac is off, thereby preserving all the settings.

One of the stored parameter RAM values, not usually accessible to the user, is the value of the default application font. This value should be set to the desired default application font number minus 1. Since Geneva is the Macintosh default application font the default value for this parameter is 2 (Geneva ID = 3, minus 1, equals 2). Although there are many values in parameter RAM that aren't ordinarily accessible to the user, a rogue application or DA can write to PRAM and inadvertently or deliberately change a value.

Some applications, like MacWrite, *use the default system font ID stored in parameter RAM to determine which font they will use. In your case I suspect that somehow your application font parameter has been changed to 3 (Monaco ID = 4, minus 1, equals 3). Removing your battery will destroy the contents of parameter RAM and when you reinstall it and reboot your Macintosh it will revert to default values for all of the parameter RAM data, including "2" for Geneva.*

Another way to change the default font back to Geneva, or from Geneva to any font in your System *file, is to use the* Default Font *DA that comes with the Dubl-Click Software World Class Font packages. There are other DAs and applications that will also do the trick. At least two of the applications are available from national electronic services, local BBSs and user groups. They are* PRAM2 *written by Ken Winograd and distributed by the Boston Computer Society and* Default Font, *by Emerging Technology, publishers of* MacOfix.

If this doesn't work you most likely have a defective clock-chip. Your dealer should have appropriate software to help further diagnose the problem.

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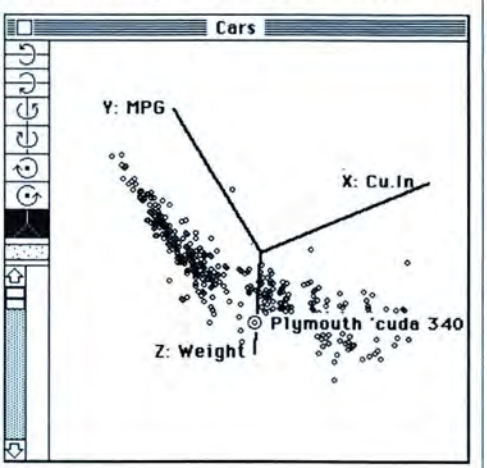

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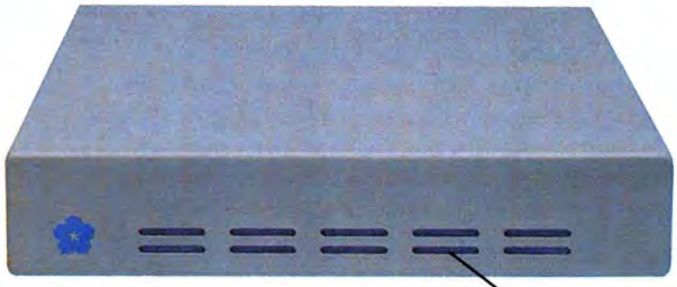

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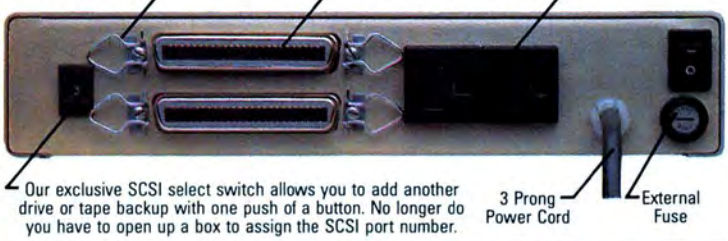

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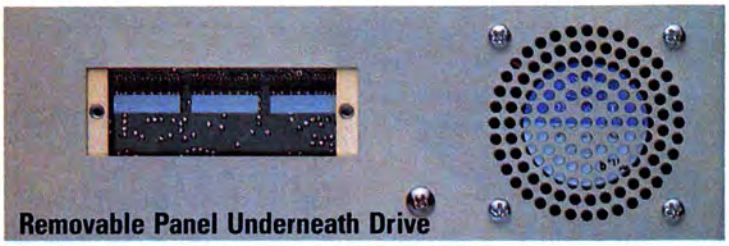

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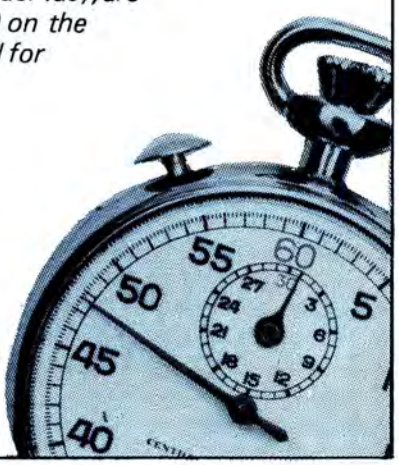

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A major manufacturer and distributor of yachting products is putting SOFTSTRIP data strips to good use moving information from its headquarters to a branch office.

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MINIFINDERS

Have you often wished for a personal assistant to help in picking software? These MiniFinders may not breathe and move, but they do tell you what products are hot and, better, what these products do. Each of these items has been carefully reviewed and selected by the* MacUser *editorial staff. Each has been rated from 1 to 5 mice. Ratings are relative within categories, and they can change as categories expand and new products advance the state of the art. You won't see many low ratings or bombs, since we're telling you about the cream of the crop, but we will warn you about the really bad products so that you don't spend your money on them. Red names indicate this month's additions. The letters at the end of the entries indicate whether a product is copy protected (CP) or not (NCP). CP? indicates that we don't know. If a product has been reviewed or QuickClicked in* MacUser*, the date of the review is shown. Next time you have to find products you can count on, count on* MacUser*!

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INTEGRATED SOFTWARE

Crunch is an icon-driven relational spreadsheet that features ★★★★ versatile charting and database capabilities. Strong financial logic, date and mathematical functions. Spreadsheets can be linked. The manual is clear and concisely written. Macros are not supported. $195. Paladin, 2895 Zanker Rd., San Jose, CA 95134. CP (Jan 86)

Excel is THE power spreadsheet. Of the Mac, of the world. Has ★★★★★ 256-column by 16,384-row capability. Features include a powerful macro function (with a recorder to make creation simple) and elaborate charting facilities. 512K+ Mac and external drive required. $395. Microsoft, 16011 NE 36th Way, Redmond, WA 98052-6399. CP (Prem)

Jazz provides well integrated modules for word processing, graphs, ★★★★ worksheets, databases and communications. HotView is best feature. Requires 512K+ and external drive. Version 1A requires 800K drive. $595. Lotus, 55 Cambridge Parkway, Cambridge, MA 02142. CP (Prem)

Microsoft Works is an integrated application that includes word ★★★★½ processing, database, spreadsheet and telecommunications functions. The telecommunications module includes background uploading and downloading. $295. Microsoft, 16011 NE 36th Way, Redmond, WA 98052. NCP (Oct 86)

Quartet is an integrated program that works on a 128K Mac, built ★★★★ around a powerful spreadsheet with a full range of functions. It can also be used as a database and provides good quality charts from spreadsheet data. Documentation is adequate, but not too well organized. $199. Haba Systems, 6711 Valjean Ave., Van Nuys, CA 91406. CP

BUSINESS ACCOUNTING

BPI General Accounting is an easy to use system. Six journals, ★★★★ AR, AP, Payroll and GL on one disk. Offset amounts automatically post to ledgers. Up to 8000 accounts. Detailed records, wide range of reports. *Switcher* and HFS compatible. $425. Requires 512K+. BPI Systems, 3001 Bee Cave Rd., Austin, TX 78746. NCP (Aug 86)

CheckMark is a Ledger with five preset journals: Cash Disburse- ★★★★ ments, Receipts, General, Sales, and Purchases. Menus and data entry are very straightforward. Flexible summary reports are built in, but customer and vendor information is very minimal. $295. CheckMark Software, PO Box 860, Fort Collins, CO 80522. CP

Gallery Finance is a one-write system with General Ledger, Cash ★★★★ Disbursements, Payables and Receivables in a single package. Data entered in a journal is automatically posted to appropriate records. Excellent manual includes tutorial on basic accounting principles. Requires 512K+, printer and external drive. $795. Micromax Systems, 6868 Nancy Ridge Dr., San Diego, CA 92121. CP (Dec 85)

Hardisk is a complex integrated hard disk system that does not ★★★½ use Mac interface. Manual is detailed but complicated, with a few pages that make it Mac-specific. Requires hard disk and printer. $695 per module. Great Plains, Box 9739, Fargo, ND 58109. CP (Dec 85)

Insight is a high-powered accounting program for the small to ★★★★½ medium size business. At present, two modules are available: Accounts Receivable and General Ledger; others are in the works. Requires 512K and hard disk. $595. Layered, 85 Merrimac St., Boston, MA 02114. NCP (Dec 86)

Rags to Riches integrated accounting modules (General Ledger ★★★★½ and Accounts Receivable) uses Mac interface to the hilt. Information entered in one window automatically transfers. No detailed or flexible reporting. Very easy to use, but it can be confusing with several windows on screen. Requires 512K+ and printer. $199.95 per module. Chang Labs, 5300 Stevens Creek Blvd., San Jose, CA 95129. CP (Dec 85)

Rags to Riches Professional Billing tracks and bills profession- ★★★★ al services. Batches activities for individual timekeepers. Use as standalone, or integrate with *R to R* modules. $399.95. Chang Labs, 5300 Stevens Creek Blvd., San Jose, CA 95129. 512K+, printer, 2 disk drives required. HFS compatible. NCP (Feb 87)

Strictly Business General Ledger features clear, well-outlined ★★★★ set-up procedures and operations. Very flexible, up to 99 profit centers with up to 100 departments each; and customized reports. Program print spools. Requires 512K+, printer and external drive. $395. Future Design, 13681 Williamette Dr., Westminster, CA 92683. NCP (Dec 85)

PERSONAL FINANCE

Dollars & Sense is a bookkeeping program. Easy to use, with a ★★★ good manual and excellent on-screen help. Will handle up to 120 separate accounts or money categories. Uses standard double-entry accounting techniques. Will work on 128K. $149.95. Monogram, 8295 S. La Cienega Blvd., Inglewood, CA 90301. CP (Mar 87)

Electric Checkbook keeps a running account of checkbook ★★★½ transactions, balances checkbook to bank statements, tracks bills, and prints out checks. Provides detailed financial statements, calculates net worth, lists expenses by category and tracks personal cash flow. $79.95. State of the Art, 3191-C Airport Loop, Costa Mesa, CA 92626. CP

Forecast is a tax estimating and what-if program designed to work
★★★ with and use *Dollars & Sense* files. Straightforward, easy to use program. $69.95. Monogram, 8295 S. La Cienega Blvd., Inglewood, CA 90301. CP

MacInTax is an excellent tool for preparing tax forms. Intuitive,
★★★★★ easy to use. Accepts data from leading personal finance programs. Good built-in help. Liberal upgrade policy for current owners. California forms set also available. $99 federal; $45 California. SoftView, 4820 Adohr Lane, Suite F, Camarillo, CA 93010. NCP (Mar 87)

MacMoney is a complete and easy to use personal financial
★★★★★ system. Intuitive data entry. Integrates with *MacInTax*. Requires 512K+. $74.95. Survivor Software, 11222 La Cienega Blvd., Inglewood, CA 90304. NCP (Mar 87)

Market Pro is a comprehensive portfolio management program for
★★★★ the generation of fundamental data as well as technical charts and graphs. Requires 512K+, external drive and Hayes-compatible modem. $395. Pro Plus Software, 2830 E. Brown Rd., Mesa, AZ 85203. NCP (Nov 86)

DATABASES

Business Filevision is a masterpiece of Macintosh programming,
★★★★ the only true graphic database on any micro. Much more powerful than the original, accepts *MacPaint* graphics. $395. Telos Software, 3420 Ocean Park Blvd, Santa Monica, CA 90405. CP (Feb 86)

dMacIII is a *dBase* compatible data base. It's semi-useful for
★★★½ converting already existing PC *dBase* files, not recommended for creating Mac data bases from scratch. Documentation is lacking, program is buggy. $495. Format, 11770 Bernardo Plaza Ct., San Diego, CA 92128. CP (Nov 86)

Double Helix is an environment to generate custom applications
★★★★ built around a data base-type framework. Contains enhancements to *Helix* 2.0. Includes custom menus, sub form windows, password protection, and a universal dump and load parser. $495. Odesta, 4084 Commercial Blvd., Northbrook, IL 60062. NCP (Oct 86)

File is a flexible data manager. Creates files for a variety of data,
★★★★ including simple graphics. Files are created in simple row/column format, but reports and forms are easily customized by moving field names around on a blank form. $195. Microsoft, 16011 NE 36th Way, Redmond, WA 98052. CP

FileMaker Plus retains features of *FileMaker* and reads *FileMaker*
★★★★★ data, also displays up to 8 files, uses "lookup" to retrieve data from other files. Enhanced calculation with many additional functions. Scripts automate a sequence of actions. Mac Plus compatible. $295. Requires 512K+. Forethought, 250 Sobrante Way, Sunnyvale, CA 94086. NCP (Nov 86)

Filevision is a simple database that can change the way you think
★★★ about data and data organization. Records are based around user created graphics screens. Screens and records can be linked in complex ways. $195. Telos Software, 3420 Ocean Park Blvd., Santa Monica, CA 90405. CP

Helix is a relational database that makes extensive use of icons.
★★★★ Setup is easy due to adherance to the Mac interface. The manual is clear, thorough and well-indexed. Complicated for simple database applications, excellent where a relational power is needed. Requires 512K+ and external drive. $395. Odesta, 4084 Commercial Blvd., Northbrook, IL 60062. NCP (Mar 86)

MacRelax is a relational list manager that stores data in a column
★★ format. Files can be related by sharing a common field. Flexible design for reports. Screen display is sometimes strange. Easy to use but not obvious to learn. $99.95. 512K required. Arrays, 6711 Valjean Ave., Van Nuys, CA 91406. NCP (Jan 87)

MegaFiler is a simple file manager. Its limited capabilities have
★★ been far surpassed by cheaper and easier to use programs. Valuable only in conjunction with *MegaForm*. $195. Megahaus, 5703 Oberlin Dr., San Diego, CA 92121. CP

Omnis 3 is a power database, featuring concurrent multiple file
★★★★ management. Can handle 24 files, 12 at a time, and is fully relational. Create custom environments including user-defined menus, commands and dialogs. $495. Blyth, 2655 Campus Dr., San Mateo, CA 94403. CP (Mar 86)

OverVUE is a power-packed relational database that has extensive
★★★★½ sorting, summarizing and report generation capacity. Has macros and a charting function. Good manual. It can exchange files with a very wide variety of other programs (including IBM software). $295. ProVUE, 222 22nd St., Huntington Beach, CA 92648. NCP (Nov 85)

Professional Bibliographic System is a specialized data base
★★★★ storing and retrieving bibliographies. Redesigned templates (20) simplify creation. Version 2.6 offers improved speed, flexible formatting. $295. Personal Bibliographic Software, Box 4250, Ann Arbor, MI 48106. CP (Feb 87)

Record Holder is a flexible, easy-to-use form-oriented data
★★★ manager. Set up is particularly simple and the search features are powerful. $49.95. Software Discoveries, 99 Crestwood Rd., Tolland, CT 06084. NCP (Apr 86)

Reflex For The Mac is a flexible relational database. Excellent
★★★★½ report generator gives full control over appearance, style of output. Requires 512K+, second drive or hard disk, highly recommended. $99.95. Borland International, 4585 Scotts Valley Dr., Scotts Valley, CA 95066. NCP (Nov 86)

Writer's Workshop maintains orderly records for writers. It can
★★★½ track manuscripts, income and publisher. Based on and includes *Runtime Helix*. $99.95. Futuresoft System Designs, PO Box 132, New York, NY 10012. NCP

NUMBER CRUNCHING

DesignScope is a construction kit for digital and analog circuits.
★★★★ Up to 254 components can be utilized in a single circuit, and the equivalent of a dual trace oscilliscope plots output in real-time. Good for testing basic (and not-so-basic) circuitry without touching a breadboard. $249.95. BrainPower, 24009 Ventura Blvd., Calabasas, CA 91302. NCP

MacCalc is a fast, competent, full-featured spreadsheet with
★★★★ impressive built-in functions, font control, on-line help, ability to expand columns and rows and read/write SYLK or WKS files. The worksheet is 125 columns by 999 rows. Cell names, printing power make *MacCalc* a very flexible pure spreadsheet. $99.95. Bravo Technologies, c/o DPAS, PO Box T, Gilroy, CA 95021. NCP (Sep 86)

MacSpin is a unique and powerful graphic data analysis program.
★★★★ Handles multivariate data in a highly visual manner. Nothing else like it for any micro. Does not support the Clipboard. $79.95. D2 Software, PO Box 9546, Austin, TX 78766-9546. CP (Jun 86)

Mindsight is a professional level decision support and business
★★★★ planning package. Can work with IFPS on mainframes, and is able to transmit models in both directions. Powerful and easy to use. Requires 512K+. $195. Execucom Systems, PO Box 9758, Austin, TX 78766. CP

Multiplan, the first Mac product from someone other than Apple is
★★★½ beginning to show age. Still a very capable basic spreadsheet with simple sorting, 63 columns by 255 rows, many built-in functions, other standard spreadsheet features. $199.95. Microsoft, 16011 NE 36th Way, Redmond, WA 98052-6399. CP (Mar 86)

StatView 512+ is a very intuitive statistical analysis program with
★★★★★ tools needed to understand any set of data. Holds data in a spreadsheet-like form. Full-featured, fast and accurate. Extremely wide range of analyses possible. Requires 512K & 800K of disk space to operate. $349.95. BrainPower, 24009 Ventura Blvd., Calabasas, CA 91302. NCP (Dec 86)

StatWorks is a general-purpose statistics package that is both
★★★★ powerful and easy to use. Handles all standard tests and procedures. Single variable and multivariate statistics are supported. $125. Cricket Software, 3508 Market St., Philadelphia, PA 19104. NCP (May 86)

MINIFINDERS

GRAPHICS & DESIGN

CalendarMaker creates monthly calendars in a variety of formats. ★★★★½ Users can incorporate their art and daily notes. Note files can be imported from a variety of DA calendars and outliners. Shareware and prelicensed. $30. CE Software, 801 73rd St., Des Moines, IA 50312. NCP (Dec 86)

Chart can easily create area, bar, column, line, pie, scatter and ★★★½ combination charts. A total of 42 styles are provided. Limited to 100 data items (64 in a series) on a 128K Mac, approximately twice that on a 512K Mac. $125. Microsoft, 16011 NE 36th WAY, Redmond, WA 98052-6399. CP

ClickArt Special Effects is a *MacPaint* enhancement desk ★★★½ accessory. Allows the user to distort, stretch, rotate and use perspective on *MacPaint* documents. A necessary addition for all serious users of *MacPaint*. $49.95. T/Maker, 2115 Landings Dr., Mountain View, CA 94043. NCP (Apr 86)

ColorPrint facilitates color printing on the standard ImageWriter. ★★★ *MacPaint* files set up as overlays are read into *ColorPrint*, and the program controls proper positioning registration and colored ribbon switching. Good results require lots of hard work, but it's cheaper than an ImageWriter II. $49.95. Esoft Enterprises, PO Box 179, Owasso, OK 74055. NCP (Mar 86)

ComicWorks is a graphics wonder. Manipulate bit mapped graph- ★★★★ ics as independent objects, with up to 64 layers of matting. An airbrush, multiple page capacity, full-screen drawing, and two disks of gorgeous artwork round out this package. Needs better LaserWriter support. $79.95. Mindscape, 3444 Dundee Rd., Northbrook, IL 60062. NCP (Nov 86)

Cricket Graph easily generates 12 graph types. Multiple windows ★★★★★ can be displayed. *Graph* prints in up to 8 colors with up to 16 patterns. Self-generating macro formatting. *Switcher*, HFS, LaserWriter and plotter compatible. $195. Cricket Software, 3508 Market St., Philadelphia, PA 19104. NCP (Jun 86)

Easy3D is a three-dimensional, solid modeling masterpiece. Four ★★★★ variable light sources, powerful sculpting tools and an exquisite user interface make this a must-have for graphics enthusiasts. Requires 512K+. Enabling Technologies, 600 S. Dearborn, Chicago, IL 60605. NCP (May 86)

Fluent Fonts is a two-disk collection of fonts. Forty-nine different ★★★★ items are included. All install easily in user Systems. Most are well executed and some are extraordinarily nice. This is a real bargain for font lovers. $49.95. Casady, PO Box 223779, Carmel, CA 93922. NCP

Fontastic is the best font editor now available for the Mac. ★★★★½ Features a large editing window with a grid to make positioning easy. Select letters to edit by clicking on a matrix of the font. Allows scaling of existing fonts and previewing the various styles (italic, bold, etc.). $49.95. Altsys, PO Box 865410, Plano, TX 75086. NCP (Dec 85)

Fontographer is a complex, but excellent laser font creator. The ★★★★½ fonts created have 300 bits per inch resolution. The fonts are actually downloadable PostScript files. $395. Altsys, PO Box 865410, Plano, TX 75086. CP

FullPaint is an expanded version of *MacPaint*. Features include ★★★★★ full-screen drawing, multiple documents open simultaneously, brush editing, movable tool palettes, special text effects and much more. It fills the gaps left by *MacPaint*. $99.95. Ann Arbor Softworks, 308½ State St., Ann Arbor, MI 48104. NCP (Jun 86)

GridMaker is a tool for artists who use perspective. The program ★★★ automatically generates a series of three-dimensional plane sets that can be pasted into *MacDraw*. Sizes and viewing vantage point are easily modified. $49. FolkStone Design, Inc., PO Box 86982, North Vancouver, BC V7L 4P6, Canada. NCP (Nov 86)

Japanese Clip Art is a two-disk set of extraordinary Japanese clip ★★★★½ art. Consists of *MacPaint* documents and separate fonts. Volume I, Heaven, covers mythological subjects; Volume II, Earth, has secular subject matters. $79.95 each volume; $149.95 set. Enzan-Hoshigumi, 150 W. Acton Rd., Stow, MA 01775. NCP

LaserFonts are new fonts for the LaserWriter. Users download ★★★★ them to their machines. Very high quality and very simple to use. *Willamette* looks like Avant Garde. *MicroFonts* provides tiny, expanded and condensed versions of the LaserWriter's own fonts. $29.95 each. Century Software, 2306 Cotner Ave., Los Angeles, CA 90064. NCP

LaserWorks is a high-resolution font and graphics editor, produc- ★★★★½ ing LaserWriter-compatible end products. Its numerous well-designed features make it suitable for users of all levels, from beginners to pros. Requires 512K+ and external drive or hard disk. $299. EDO Communications, 63 Arnold Wayh, W. Hartford, CT 06119. CP (Sep 86)

The Mac Art Dept. is a collection of over 150 graphic images ★★★★ ranging from foods to hands holding signs to borders. Best suited for letterheads, memos, other business use. $39.95. Simon & Schuster, Computer Software Div., 1230 Ave. of the Americas, New York, NY 10020. NCP (Mar 86)

Mac-a-Mug is an Identikit type program for creating faces from ★★★½ facial feature files. Uses scroll bars that are slow and jerky. Lots of creative fun. 512K+ Mac required. $59.95. Shaherazam, PO Box 27731, Milwaukee, WI 53226. CP (Jul 86)

MacDraft is an object-oriented graphics program. It sports ad- ★★★★ vanced features such as variable scaling, single degree rotation, complex arcs and a FatBits-like magnification mode. $239. Innovative Data Design, 1975 Willow Pass Rd., Concord, CA 94520. NCP (Feb 86)

MacDraw is an object-oriented structured graphics program. Can ★★★★½ be used to design forms, create presentation materials and do technical illustrations. Drawing sizes up to 8 feet by 10 feet are possible. Text can be easily generated and integrated in the graphics. $195. Apple Computer, 20525 Mariani Ave., Cupertino, CA 95014. NCP (Nov 85)

MacModel is an economical 3D package with shading. Somewhat ★★★ sketchy Mac interface, shading speed slow (but acceptable), grainy image resolution. On-line help screens are a welcome addition. Frequent updates and low price make this a reasonably good buy. $40. A.P.P.L.E. CO-OP, 290 SW 43rd St., Renton, WA 98055. NCP (Aug 86)

MacPaint is the graphics program that started a whole new genre. ★★★★ Still the best freehand graphics tool. Version 1.5 supports 512K+ Macs and the LaserWriter. Multiple tools, patterns and features too numerous to describe. A work of art for artists. $125. Apple Computer, 20525 Mariani Ave., Cupertino, CA 95014. NCP (Nov 85)

MacPublisher II is the souped-up version of *MacPublisher*. Allows ★★★★ *MacWrite* and *Word* files to be imported and edited; allows up to 96 pages; supports kerning, borders, cropping, and it runs on 128K Macs. $195. Boston Software Publishers, 1260 Boylston St., Boston, MA 02215. CP (Sep 86)

Mac3D 2.0 is a feature-laden 3D program with a *MacDraw*-like ★★★★ interface. PostScript-resolution shading with six variable light sources, user-definable tools, and many more features make this a graphic powerhouse. $249.95. Challenger Software, 18350 Kedzie Ave., Homewood, IL 40430. NCP (Jan 87)

MapMaker produces maps and analyses of related geographical ★★★★½ data. Additional data disks available. Documentation could be better. Requires 512K; second drive recommended. $295. Select Micro Systems, 2717 Crescent Dr., Yorktown Heights, NY 10598. NCP (Jan 87)

MockPackage+ is a set of extremely powerful DAs. Includes a ★★★★½ text editor, text printer (supports LaserWriter), charter, terminal and EZmenus. HFS compatible. $35. Published by CE Software, 801-73rd St., Des Moines, IA 50312. NCP (Mar 87)

PageMaker is an advanced layout and makeup program. Can ★★★★½ easily create multiple page documents. Output is optimized for LaserWriter. Good documentation. $495. Aldus, 411 First Avenue South, Seattle, WA 98104. CP (Jun 86)

Phoenix 3D is an economical 3D drawing package, with features ★★★★ that belong in a more expensive program. Multiple light sources, fine object placement and orientation control, and

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MacDraft 1.2

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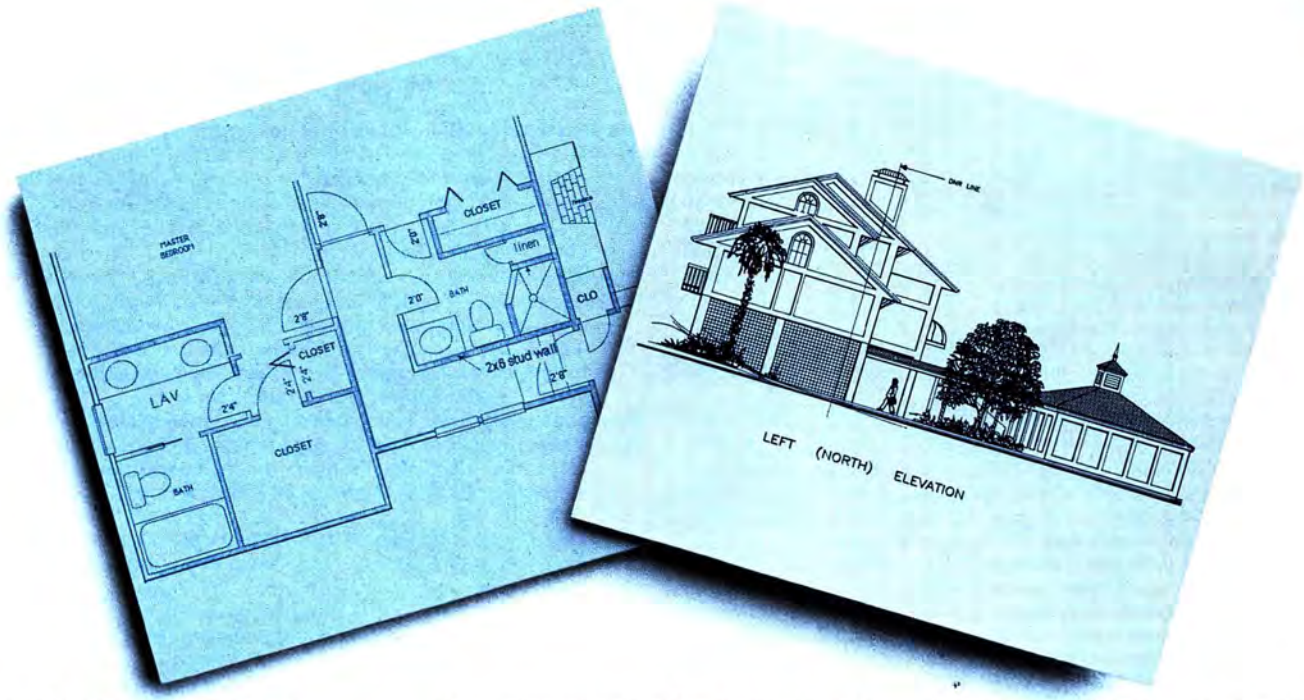

Drawing Environment

Choose your scale and units and MacDraft will do the rest. Dimensions of objects, snap grids, rulers, cursor positions, area calculations and auto dimension lines will be computed for you.

New Features:

Resize groups & bit maps proportionally. Bit maps can also be stretched in an X, Y direction independently.

Cursor position indicator. Determines the relative position of an object on the drawing.

Hard disk install or de-install your copy of MacDraft.

New drawing scales. Choose from 32, including 2 new engineering scales; 4x & 10x, both in US and metric units.

Increased accuracy. Select from 1 to 4 places behind the decimal point. The values will be rounded off correctly.

Automatic area calculation of any object to scale regardless of complexity. Even trace the boundaries of overlapping objects to obtain net area.

Pict format allows you to save a drawing as well as open a document that has already been saved in this format. Transfer large drawings to a plotter driver that supports the format and conveniently use selected page layout programs.

64 Fill & ink patterns plus dynamically edit, create and save your custom patterns.

Plus:

Create circles by radius or diameter, arcs by radius or defining 3 points. For irregular shapes our polygon and freehand tools offer dynamic editing, auto closure and adding sides to an existing object. Zoom in and magnify a portion of your drawing up to 8x; or zoom out and see as much as 4′ x 4′ in a single window, maintaining full drawing capabilities at any view. Even rotate objects 1° at a time.

Don't Be Deceived

MacDraft is only $269.00, yet it offers the majority of drawing capabilities of CAD systems costing much more. It is the only drafting program that takes full advantage of the Macintosh user interface.

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MINIFINDERS

a good selection of shapes. $39.95. Dreams of the Phoenix, PO Box 10273, Jacksonville, FL 32247. NCP (Oct 86)

PictureBase is a program and accompanying desk accessory for ★★★★★ organizing *MacPaint* and *MacDraw* files. Graphics are organized into libraries, and can be searched for by keywords. $69.95. Symmetry Corporation, 761 E. University, Mesa, AZ 85203. NCP (Jun 86)

The Print Shop makes it easy to create greeting cards, banners, letterhead and signs in minutes. Offers full access to fonts, styles, graphics. Can pull images from *MacPaint* files or off the Clipboard. Fun and easy to use. $79.95. Broderbund, 17 Paul Dr., San Rafael, CA 94903. CP (Dec 86)

Ragtime is an "Integrated Page Processor" with text, graphics and ★★★★ built-in spreadsheet. Flow text automatically from one frame to another. Spreadsheet has a full set of functions. Excellent, easy to use program. Requires 512K+. $395. Orange Micro, 1400 N. Lakeview, Anaheim, CA 92807. CP (Feb 87)

ReadySetGo is a page makeup program for 512K+ Macs. Users ★★★★½ build up pages from blocks of text, graphics and rules. Text and art may be pasted in from another source or created within the program. Good LaserWriter support. $195. Manhattan Graphics, 401 Columbus Avenue, Valhalla, NY 10013. NCP (Apr 86)

Slide Show Magician 1.3 is useful for creating full screen audio-★★★ visual presentations on the Mac. Frame branching, improved editing capabilities, external cassette recorder synchronization and digitized sound capabilities make this much more powerful than the original. $59.95. Magnum, 21115 Devonshire St., Chatsworth, CA 91311. CP (Mar 86)

Storyboarder produces working animated storyboards for use in ★★★★ film and video production. Imports graphics from *MacPaint;* allows screen masking to simulate television, 35mm or 70mm screen widths; allows limited animation and special effects. Storyboards can be printed in several formats. $495. American Intelliware, PO Box 6980, Torrance, CA 90504. CP (Nov 86)

Sunshine Graphics Library is a collection of 36 400K disks (to ★★★★ date) with a wide variety of high-quality digitized images stored as *MacPaint* files. Each disk comes with a laser catalog. $20/disk: discounts scale for multiple purchases. SunShine, Box 4351, Austin, TX. NCP (Feb 87)

SuperPaint is a powerful, easy-to-use graphics program with all ★★★★★ the best features of *MacPaint* and *MacDraw* — and then some. Among the new features, LaserBits provides 300 dpi magnification and there are 40 editable brush shapes. Requires 512K+. $99. Silicon Beach, 9580 Black Mountain Rd., PO Box 261430, San Diego, CA 92126. NCP (Feb 87)

VideoWorks is a full-featured animation package. Professional ★★★★ quality animations are easily accomplished using the tools provided. Comes with an art disk of predrawn images and *Art Grabber.* $99.95. Hayden, 600 Suffolk St., Lowell, MA 01854. CP (Nov 85)

World-Class Fonts! comes in two volumes of three disks each. ★★★★½ Includes all the *Mac the Knife* fonts and a lot more, including 2 useful utilities. This is now the best collection of ImageWriter fonts available. Each volume: $39; both volumes: $59. Dubl-Click Software, 18201 Gresham St., Northridge, CA 91325. NCP (Dec, 86)

COMMUNICATIONS

HomePak is a package consisting of *HomeTerm,* an excellent ★★ simple telecommunications program with strong macro features; *HomeFind,* an electronic filer as bad as *HomeTerm* is good; and Apple's *Edit,* a simple, non-HFS-compatible text-file editor. $49.95. Batteries Included, 30 Mural St., Richmond Hill, Ontario L4B 1B5, Canada. NCP (Aug 86)

InTalk comes with its own communications command language ★★★★½ able to do unattended sessions. Supports Xmodem and MacBinary. Has a macro key function. Many sample set up documents and command language files provided. $145. Palantir, 12777 Jones Rd., Houston, TX 77070. CP (Prem)

MacTerminal provides basic telecommunications and terminal ★★½ emulation for the Mac user. Doesn't have macros nor any sort of auto redial/auto logon capability. Best for those needing faithful VT100 or IBM 3278 emulation — it is superb at those. $99. Apple Computer, 20525 Mariani Ave., Cupertino, CA 95014. NCP (Prem)

Microphone is a high-powered terminal program that's easy ★★★★ enough for novices. Very powerful command language allows full automation of communications, if desired. $74.95. Software Ventures, 2907 Claremont Ave., Berkeley, CA 94705. NCP (Jun 86)

Red Ryder is a full-featured telecommunications program that ★★★★★ supports MacBinary, Xmodem and Kermit. Remote service procedures, auto procedure writer and keyboard macros allow automation of many operations. It is shareware and a real bargain. $40. The FreeSoft Corp., 10828 Lacklink, St. Louis, MO 63114. NCP (Jun 86)

Smartcom II balances power and ease of use. Capable of ★★★★½ unattended operation and has a very powerful command language. Supports MacBinary, Xmodem, and Hayes Verification protocols. The large screen buffer can easily be archived. $149. Hayes, 5923 Peachtree Industrial Blvd., Norcross, GA 30092. NCP (Prem)

Telescape is the power telecommunicator's terminal program. Can ★★★ be configured to emulate any terminal. The documentation does not adequately explain the many features. $125. Mainstay, 28611B Canwood St., Agoura Hills, CA 91301. NCP (Jun 86)

VersaTerm features include DEC VT100 and VT52, Tektronix 4014 ★★★★½ graphics terminal and Data General DG200 emulation. Supports Xmodem and MacTerminal Xmodem protocols and MacBinary. *VersaTerm* is easy to use and well documented. $99. Peripherals, Computers & Supplies, 2457 Perkiomen Ave., Mt. Penn, PA 19606. CP (Prem)

VersaTerm-Pro is a very powerful terminal program with several ★★★★½ special features. Does one of the best VT100 emulations available and specializes in high-quality Tektronix 4014 and 4105 emulation. A pro's tool. Requires 512K+. $295. Peripherals, Computers & Supplies, 2457 Perkiomen Ave., Mt. Penn, PA 19606. NCP

WORD PROCESSORS

Document Compare allows users to compare any two *MacWrite* ★★★ 4.5, ASCII or MDS documents. Differences in spelling, punctuation, formatting and wording are detected. Documents can be printed out with differences highlighted. $99. The Model Office Company, 49 Wellington Street East, Toronto, Canada M5E 1C9. CP (May 86)

Document Modeler can automate much of a professional office's ★★★★½ correspondence. Comes in two parts: *Template Maker* and *Document Maker.* Initial set-up requires time and is complex. $299.95. The Model Office Co., The Gooderham Flatiron Bldg., 49 Wellington St. E., Toronto, Ontario M5E 1C9, Canada. NCP (Mar 87)

EgWord is a *MacWrite* lookalike that allows full Japanese kanji ★★★ word processing on the Mac. Does a superlative job of making Japanese text-entry as easy as possible. Great for students of Japanese. $300. Counterpoint Systems, PO Box 1685, Cambridge, MA 02138. CP (Apr 86)

Just Text is a professional level word processor and page makeup ★★★★½ program that generates PostScript output. Comes with a set of LaserWriter utilities that allow total manipulation of art and text. Requires LaserWriter or other PostScript compatible output device. $195. Knowledge Engineering, GPO Box 2139, New York, NY 10116. NCP (Dec 85)

Laser Author is a high-powered, technically oriented word proces-★★★½ sor. Good math setting capability. Has style sheets, word count and page layout capability. $199.95. Firebird Licensees, PO Box 49, Ramsey, NJ 07446. NCP (Mar 87)

Liberty Spell Checker is a fast, effective interactive checker. The ★★★½ dictionary is smaller than average, but well chosen. Unfortu-

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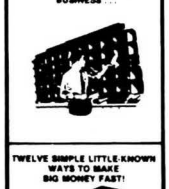

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nately, it has a few misspelled words. $59.95. DataPak, 14011 Ventura Blvd., Sherman Oaks, CA 91423. CP (Oct 86)

MacGAS is a DA spelling checker with both a small and extended dictionary. Its best point is the excellent thesaurus, provides antonyms & glossary. A slow checker. $99. EnterSet, 410 Townsend St., San Francisco, CA 94107. CP (Oct 86)

MacIndexer is a good writer's utility that takes much of the mechanical work and time out of preparing an index. Works with *MacWrite* and *Word*. Can generate word frequency counts. $79.95. Boston Software Publishers, 1260 Boylston St., Boston, MA 02215. CP (Jul 86)

MacLightning is an interactive spelling checker in desk accessory form. Text can be checked on the fly or by selection. Works within many applications, and options include a thesaurus, medical and legal dictionary. $99.95. Target Software, 14206 Southwest 136th St., Miami, FL 33186. NCP (Oct 86)

Macspell+ (version 1.10) is a spelling checker that installs as a desk accessory. Works easily with *MacWrite* 4.5 and 2.2 and *Word*, but has some drawbacks. New version just available. Requires 512K+, two drives or hard disk. $99. Creighton Development, 16 Hughes, Irvine, CA 92718. NCP

MacWrite is the basic Mac word processor. While it doesn't have every bell and whistle, it is more than adequate for most users. Features include global search and replace, page numbers indicated in the scroll bar and excellent LaserWriter compatibility. $125. Apple Computer, 20525 Mariani Ave., Cupertino, CA 95014. NCP

MindWrite is an outliner-based word processor of considerable power. Besides outlining, it allows multiple documents and multiple selections. Excellent if you like to outline your writing first. $125. MindWork Software, PO Box 222280, Carmel, CA 93922. NCP (Mar 87)

QuickWord is a word processing accessory that adds sophisticated glossaries to *MacWrite*. Simple to install and use, yet powerful and efficient. $49.95. EnterSet, 410 Townsend St., San Francisco, CA 94107. NCP

The Right Word (ver 3.0)is a standalone spelling checker that can be used with *Word*, *MacWrite* and *Jazz*. Dictionary scrolling can only be done one word at a time. You have to reload program to check each document. Biggest minus is speed. $89. Assimilation, no longer in business. NCP (Oct 86)

Spelling Champion is a fast and accurate batch-type spelling checker. Backup feature allows you to undo corrections in a paragraph. Works only with *MacWrite* 4.5. $39.95. Champion Software, 5201 South Hill Dr., Madison, WI 53705. NCP (Oct 86)

Spellswell is an effective and powerful standalone spelling checker. It has many advanced features such as capitalization and homonym checking and comes with a large, well-chosen dictionary. $59.95. Greene, Johnson, 15 Via Chualar, Monterey, CA 93940. NCP (Oct 86)

Thunder! is the best spelling checker currently available. Has a 50,000-word dictionary. Features Learned Words (a superb glossary) and statistics. A very fast DA, it works interactively and in selection mode. Requires 512K+. $49.95. Batteries Included, 30 Mural St., Richmond Hill, Ontario, Canada L4B 1B5. NCP (Dec 86)

Voila! is a full-featured outliner in desk accessory format. Headlines can be edited like normal text. Reads and writes text files, *Word*, *MacWrite*, *ThinkTank* and *MORE* documents. An excellent value. Requires 512K+, 800K drive or external 400K drive. Mac XL not supported. $99.95. Target Software, 14206 SW 136th St., Miami, FL 33186. NCP (Mar 87)

Word is a power word processor for the Mac. It has just about every feature your heart could desire. Supports keyboard commands as well as the mouse. Does mail merge and multicolumn text. Integrates with the rest of the Microsoft line. $195. Microsoft, 16011 NE 36th Way, Redmond, WA 98052-6399. CP (May 86)

Word 3.0 is the most feature laden word processor now available. Has a spelling checker, hyphenation, some page layout, style sheets and more. Also has Microsoft's somewhat unusual view of what the Mac interface is. Requires 512K+ and at least 1200K of external storage. $395. Microsoft, 16011 NE 36th Way, Redmond, WA 98073. NCP (Mar 87)

Word Handler is a word processor with elements of *MacWrite* and *Word*. Can delete, rename, etc., without quitting. Has case change, flexible printing options and glossary. Slow. $79.95. Advanced Logic Systems, 1283 Reamwood Ave., Sunnyvale, CA 94089. NCP (Oct 86)

WriteNow for the Macintosh has many of the features of *MacWrite* and then some, including the ability to work in columns. Has built-in spelling checker with 50,000-word dictionary. $175. T/Maker, 1973 Landings Dr., Mountain View, CA 94043. NCP (Mar 87)

ORGANIZATIONAL TOOLS

Acta is an outline processor in desk accessory format. It has practically all the power of a standalone program, and then some. Can save files as *Acta* outlines, *MacWrite* or text files. A must-have for those who do outlining. $59.95. Symmetry, 761 E. University Dr., Mesa, AZ 85203. NCP (Jul 86)

Calliope is a new type of outlining program. Chunks of information are manipulated as small "light bulbs" containing text. Related elements can be graphically connected, and their text information viewed in hierarchical order. Text files can be created for *MacWrite* editing. $59.95. Innovision, PO Box 1317, Los Altos, CA 94023. NCP (Sep 86)

DecisionMap organizes data to facilitate decision making. Unique weighting abilities make this a powerful tool. The decision analysis process is long and some times complex, but never difficult. $145. SoftStyle, 7192 Kalanianole Hwy., Honolulu, HI 96825. CP

Design is a powerful organizational tool. It goes beyond mere flowcharting. Complex, detailed program aimed at software pros. $200. Meta Software, 55 Wheeler St., Cambridge, MA 02138. NCP (Mar 87)

MacProject allows a user to plan and track a project from beginning to end. Uses CPM to produce schedules with start and finish dates for each task. Can report on resource interdependencies and generate all needed printed reports. $125. Apple Computer, 20525 Mariani Ave., Cupertino, CA 95014. NCP (Mar 86)

MacSpec is a specification writing tool, a cross between word and outline processors. Can automatically number and indent headings, and renumber everything when lines are moved. Text under headings is handled and formatted as though in a simple word processor. HFS-compatible. $199.95. LM Software, PO Box 93, Belmont, CA 94002. NCP (Oct 86)

MaxThink is an outline and idea processor that focuses on thinking skills. Helps you establish priorities, evaluate ideas, synthesize information. Some unique features and an innovative manual. $89. MaxThink, 230 Crocker Ave., Piedmont, CA 94610. NCP (Oct 86)

Micro Planner Plus is a great project management system with major enhancement to *Micro Planner*. Outstanding analysis capability. Memory based, making it much faster than the original. Includes a font menu. Even saves reports out in *MacDraw* format for further work. Uses standard print drivers. HFS compatible. Micro Planning Software USA, 235 Montgomery St., San Francisco, CA 94104. CP (Dec 86)

MORE is an incredibly powerful outline processor with gobs of great features: instant charts, math capabilities, multiple windows, font and style control, templates and more. Prints outlines in any of several standard formats, even in color. Requires 512K+. $295. Living Videotext, 2432 Charleston Rd., Mountain View, CA 94043. NCP (Sep 86)

ThinkTank 512 is a very fast and intuitive organizational tool. Full keyboard control is possible. Can store and paste graphics into outlines. Slide show features allows high-quality presentations to be created. Good report formatting and printing capability. $195. Living Videotext, 2432 Charleston Rd., Mountain View, CA 94043. CP (Jan 86)

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BatteryPak is a set of 9 handy desk accessories including ★★★★★ scientific and RPN calculators, a background text file printer and a 250-page note pad with search and phone dialing capabilities. *Disk Tools* is the best DA currently available. $49.95. Batteries Included, 30 Mural St., Richmond Hill, Ontario, L4B 1B5, Canada. NCP (Dec 85)

Executive Office is a jack of all trades office application. Good ★★★½ data base, word processing, graphics and minispreadsheet. Available on 400 or 800K disks; get the 800 if you can. $249.99. Published by DataPak, 14011 Ventura Blvd., Sherman Oaks, CA 91423. CP (Mar 87)

Front Desk lets small businesses and offices easily keep track of ★★★ personnel schedules, activities and payments. The program can keep track of up to 15 employees, functioning as a day-, week- and month-at-a-glance calendar. $149.95. Layered, 85 Merrimac St., Boston, MA 02114. CP (Dec 85)

My Office lets you handle your files and papers in much the same ★★★★ way you did before you got a computer. Excellent use of graphic symbols makes this program the easiest to use of its type. $129.95. DataPak, 14011 Ventura Blvd., Sherman Oaks, CA 91423. CP (Prem)

Quickset is a set of desk management and organizational tools ★★★ that can be used as desk accessories or applications. Functions include note filer, card filer, calendar, phone dialer, financial and statistical calculators and a file encryptor. $49.95. EnterSet, 410 Townsend St., San Francisco, CA 94107. NCP (Dec 85)

Sidekick is a set of desk organization applications and accesso- ★★★★ ries. Functions include phone dialer and logger, desk accessory terminal, calculator, clock, editor and more. When resource files are included modules take up a lot of disk space. $84.95. Borland International, 4585 Scotts Valley Dr., Scotts Valley, CA 95066. NCP (Dec 85)

Smart Alarms is the best reminder system for the Mac. Easy to ★★★★½ use, versatile, and, well, smart. This self-running DA automatically reminds you of anything you enter into its Reminder file, giving you a wide range of useful advance warning options. $49.95. Imagine Software, 2000 Center St., Berkeley, CA 94704. NCP (Oct 86)

Top Desk is a set of 7 self-installing (and self-removing) DAs. ★★★★½ Menu Key adds Command key sequences to programs, View allows looking at and moving data between up to 8 *MacWrite* documents, BackPrint, Shorthand, Blank, Encrypt, and Launch. $59.95. Cortland Computer, PO Box 9916, Berkeley, CA 94709. NCP (May 86)

UTILITIES

Accessory Pak 1 is a set of useful applications and utilities. *Paint* ★★★★ *Cutter* alone is worth the price. That program allows users to browse and manipulate full page *MacPaint* documents. $39.95. Silicon Beach, PO Box 216430, San Diego, CA 92126. NCP (Nov 85)

Copy II Mac does efficient sector and bit copies and in its latest ★★★★★ version can back-up virtually all Mac software. Features graphic displays of copy progress. Comes with *MacTools*, a multi-use utility that can recover many damaged files. $39.95. Central Point Software, 9700 SW Capitol Highway, Portland, OR 97219. NCP (Apr 86)

DiskExpress unfragments disk volumes by reorganizing data into ★★★★ continuous sectors and arranging files to slow down further fragmentation. Works with *MacServe*, floppy drives and most hard drives. Requires 512K+. $29.95. ALSoft, Box 927, Spring, TX 77383. NCP (Feb 87)

Disk Ranger is a speedy cataloguing program that doubles as an ★★★★ efficient labelmaker. Comes with pinfeed labels. Works with regular and hard disks. Can catalog HFS systems. $49.95. Mainstay, 28611B Canwood St., Agoura Hills, CA 91301. NCP (Mar 86)

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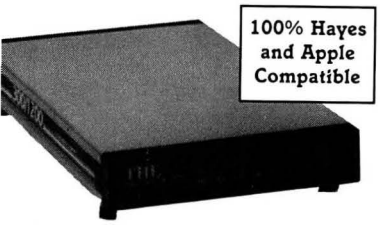

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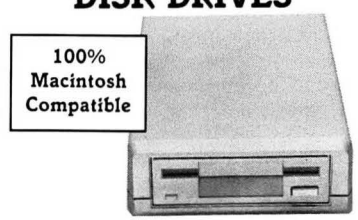

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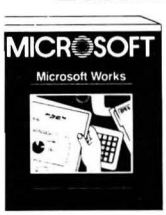

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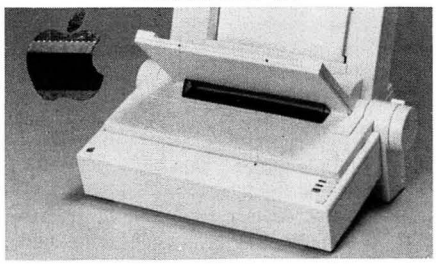

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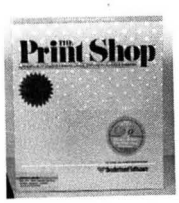

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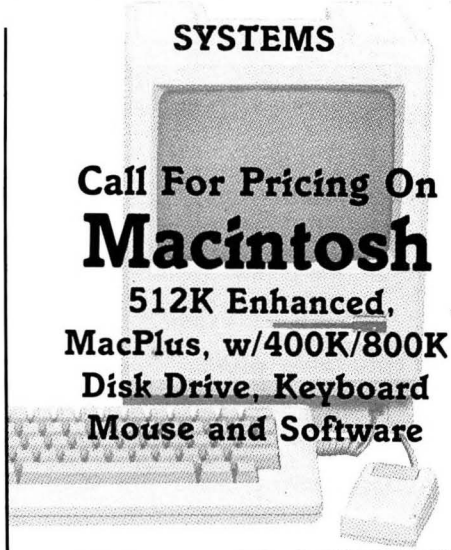

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Dubl-Click Calculator Construction Set lets users design personalized calculators with a variety of standard and special functions. Finished calculators can be saved as installable desk accessories or as clickable applications. $59. Dubl-Click Software, 18201 Gresham St., Northridge, CA 91325. NCP (Apr 86)

Fedit Plus is the file and disk editor for everyone, from newest Mac owner to oldest. It can do more for your disks and files than any other application. Can recover deleted MFS files. If you own a Mac, get it. HFS-compatible. $49.95. MacMaster Systems, 939 E. El Camino Real, #122, Sunnyvale, CA 94087. NCP (Sep 86)

FlashBack is a utility to backup HFS hard disks onto floppies. A unique graphic display of the HFS directory facilitates file selection. The program can handle files larger than 800K. $59.95. Mainstay, 28611B Canwood St., Agoura Hills, CA 91301. NCP (Nov 86)

Glue adds a print-to-disk capability to many programs. *ImageSaver* installs as printer driver, *Viewer* allows copying and printing of *Glue* files. Handy utility for desktop publishers. $49. Solutions, Box 989, Montpelier, VT 05602. NCP (Dec 86)

Hard Disk Util uses patch files to allow users to mount and run specified programs on their hard disks. The list of patches is constantly expanding. $89.95. FWB Software, 2040 Polk St., San Francisco, CA 94109. NCP

HFS Backup ranks as one of the preferred hard disk backup utilities. Backup by file/folder or last changes. Backup specifications can be saved as templates. Good graphic interface. Reliable program. $49.95. PCPC, 6204 Benjamin Rd, Tampa, FL 33614. NCP (Dec 86)

HFS Locator Plus is *the* essential HFS desk accessory. It can search for a file by name or date of creation, create folders, move files from one folder to another, set a program to launch while in an application. $34.95. PBI Software, 1111 Triton Dr., Foster City, CA 94404. NCP (Sep 86)

LaserServe is a printer spooler for AppleTalk networks. After installation all operations done via a desk accessory. Works with both *MacServe* and *TOPS*. Requires 512K+ and 800K drive or hard disk. $125 per node. Infosphere, 4730 SW Macadam Ave., Portland, OR 97201. NCP (Feb 87)

Mac Disk Catalog II is a utility that will quickly organize a moderate size disk library. Easy to use with powerful label-making features. $49.95. New Canaan MicroCode. 136 Beech Rd., New Canaan, CT 06840. NCP (Dec 85)

MacFlow is a design tool created for programmers. Traditional flowcharting symbols are linked together, and a symbol can be connected to a separate flowchart file. Symbols can't be edited, precluding using *MacFlow* for other applications. $125. Mainstay, 5211-B Derry Ave., Agoura Hills, CA 91301. NCP

MacInUse tracks time spent in applications and saves info as text file. Installs on any disk, works in background. MFS, HFS compatible. Templates included for *MacWrite*, MS *Word*, *Multiplan* and *Excel*. Extremely valuable for tax purposes, client records, etc. V1.0. $49. SoftView, 4820 Adohr Lane, Camarillo, CA 93010. NCP (Jan 87)

MacLabeler lets users instantly index and print labels for all the disks in a burgeoning collection. Choose border type and orientation of your label; index by folder or document. Starter set of labels is included. $49.95. Ideaform, PO Box 1540, Fairfield, IA 52556. CP (Prem)

MacLink lets users transfer data between Macs and PCs. Can do special format transfers such as *1-2-3* to *Multiplan* and *WordStar* to *MacWrite*. Contains both Mac and PC disks, interface cable is optional. Has Mac and MS-DOS disks. $125, $155 with 8-ft interface cable. DataViz, 16 Winfield St., Norwalk, CT 06855. NCP

MacNosy is a global disassembler. A very advanced user can use this program to look into the code of virtually any program. This advanced tool can take you places no other Mac program could dream of going IF you have the skill to guide it. The documentation is sparse. For pros only. $85. Jasik Designs, 343 Trenton Way, Menlo Park, CA 94025. NCP

Mac + II lets you run Apple II software on the Mac. Emulation speed is only 35 to 45 percent of a real Apple II, so graphics especially suffer. Games also run slow. Runs AppleWorks (Apple II integrated software). Good for ex-Apple II owners who have large software collections. $149.95. Meacom, PO Box 272591, Houston, TX 77277. CP

MacSafe is a data file security program that allows you to place multiple files into a "safe", and then you can further protect them through two types of encryption (including DES). Flexible and very easy to use. Allows for installation on hard disk. $69.95.Kent Marsh Limited, Inc., 1200 Post Oak Blvd., Houston, TX 77056. CP (Mar 87)

MacServe converts a Mac and a hard disk into a disk and print server. Uses the AppleTalk network and is easily hooked up. Users can partition the hard disk into multiple volumes. Runs in the background, so users can work on all machines in the network. $250. Requires 512+ or Mac XL. Infosphere, 4730 SW Macadam, Portland, OR 97201. CP

MacZap is a three-part disk and memory utility. It can be used to recover some damaged files and disks, compare disks, analyze disk structure and make back-up copies of most disks. $60. Micro Analyst, 2505 Roxmoor, Austin, TX 78723. NCP (Jan 86)

myDiskLabeler is an excellent label making program. It can read directories, or use large or small icons, or anything else the user desires. Comes with 54 precut labels on pinfeed paper. HFS compatible. $44.95; with color printing ability (on the ImageWriter II), $54.95. Williams and Macias, PO Box 19206, Spokane, WA 99219. NCP (Aug 86)

'Ncryptor is a simple, safe program that lets users password their files. The same program is used for encoding and decoding. This is the best product in its category. $39.95. Mainstay, 28611B Canwood St., Agoura Hills, CA 91301. NCP

Packer is a simple utility that compresses files. It can be used to save disk space and also protect files. Typical space savings range from 20 to 50% depending on the original file type and size. This is the best program of its type so far. $29. Bobbing Software, 67 Country Oaks Dr., Buda, TX 78610. NCP (Jun 86)

PackIt III is an essential utility. Primarily used to temporarily "glue" files together, it can also compress and encrypt. Feeware. $10, $10 for printed manual. Harry R. Chesley, 1850 Union St., San Francisco, CA 94123. NCP (Jan 87)

PC to MAC and BACK has both Mac and MS-DOS disks. This program efficiently transfers text and other data between PCs and Macs. The documentation is excellent. Does special format transfers such as *WordStar* to *MacWrite*. Includes a cable for direct Mac to PC connections. $149.95. dilithium Press, 8285 SW Nimbus, Beaverton, OR 97005. NCP

Quick & Dirty Utilities, Volume One is a disk chock full of the handiest programs you have ever bought. Included are a super disk cataloguer, a desk accessory mover and more. Several desk accessories including a menu bar clock and a terminal are on the disk. $39.95. Dreams of the Phoenix, PO Box 10273, Jacksonville, FL 32247. NCP (Nov 85)

Switcher is Andy Hertzfeld's contribution to Mac productivity. This program lets users run several programs at once (up to 8 on a 1-megabyte or larger machine). Switching between the programs is near instantaneous. Requires 512K+. $19.95 from Apple, free from BBSs, included with some third-party applications. Apple Computer, 20525 Mariani Ave., Cupertino, CA 95014. NCP

Tempo is a desk accessory that allows most Mac commands to be intelligently recorded and played back. Capabilities include pausing, conditional branching and macros that work between applications. $99. Affinity Micro Systems, 1050 Walnut St., Boulder, CO 80302. NCP (Jul 86)

TMON is *the* debugger for the Mac. This isn't open to question. *TMON* is simply the best. Comes with the latest version of Darin Adler's Extended User Area. $100. ICOM Simulations, 626 Wheeling Rd., Wheeling, IL 60090. NCP

MINIFINDERS

TurboCharger 2.0 rev. D is a RAM cache utility for 512K and ★★★★★ larger. Works on most hard disks and Mac XLs. Dramatically improves any program you use that heavily accesses the disk, like *MacPaint*. $69.95. Microsystems, PO Box 1249, Capitola, CA 95010. NCP (Jan 87)

TurboDownload is a desk accessory designed specifically to ★★★★½ increase the speed of Xmodem data transfers from national databases to your Mac. Speed increases range upward from 50% to over 300% at 2400 baud. $39.95. Mainstay, 28611B Canwood St., Agoura Hills, CA 91301. NCP

Twelve-C Financial Desk Accessory brings all the power and ★★★★ functionality of a Hewlett-Packard 12C programmable calculator to your desktop. Can be programmed and all registers can be viewed while calculator is running. $39.95. Dreams of the Phoenix, PO Box 10273, Jacksonville, FL 32247. NCP

II In a Mac is a graphically oriented Apple II emulator with unique ★★★ features, such as text and graphics copy from Apple screen to Mac Clipboard. Suffers speed problems associated with "virtual machine" emulation. $69. Micro-W Distributing, 1342B Route 23, Butler, NJ 07405. CP

TypeNow is a desk accessory that allows the Mac and ImageWriter ★★★★ to function as an electronic typewriter. Type can be placed into blanks in complex forms easily. Typing can be recorded and played back. $39.95. Mainstay, 28611B Canwood St., Agoura Hills, CA 91301. NCP (Jan 86)

LANGUAGES

AAIS Prolog is a fast standard Prolog with excellent debugging ★★★★ and error handling. Good for serious program development. Documentation is not as good as the program. $150. Advanced AI Systems, PO Box 39-0360, Mountain View, CA 94039-0360. NCP (Mar 87)

Aztec C is a C language that will appeal to users with a UNIX ★★★★ background. It uses many UNIX conventions and in the more expensive versions comes with standard UNIX utilities, including the VI editor. $199 basic system, $299 development system, $499 commercial system. Manx Software Systems, PO Box 55, Shrewsbury, NJ 07701. NCP (May 86)

ExperLISP is a very buggy, but still incredibly useful, programming ★★★ language for high-level programmers. The more you use it, the more you'll figure out about it. System crashes are too common for a language this useful and expensive. $495. Requires 512K and either an external or a hard drive. ExperTelligence, 559 San Ysidro Rd., Santa Barbara, CA 93108. CP

ExperLogo is a version of the popular teaching language, Logo. ★★★ Features three-dimensional graphics using "bunnies" rather than usual "turtles." Very speedy, smooth program. Comes with an excellent manual. $149.95.ExperTelligence, 559 San Ysidro Rd., Santa Barbara, CA 93108. CP

ExperProlog II is a Prolog based on the new Prolog II standard. ★★★ Has the ability to handle infinite trees and allows user-defined functions that operate conditionally. Documentation is not the best and Mac interface is nonstandard. $495. ExperTelligence, 559 San Ysidro Blvd., Santa Barbara, CA 33108. NCP (Mar 87)

LAP MacProlog is a flexible program that supports several Prolog ★ syntaxes, producing a rich programming environment. However, the program's implementation and documentation are both poor. $295. Programming Logic Systems, 31 Crescent Dr., Milford, CT 06460. NCP (Mar 87)

LightSpeed Pascal is a fast, powerful development system for ★★★★★ Pascal programming. Requires 512K+. $125. Think Technologies, 420 Bedford St., Lexington, MA 2173. NCP (Feb 87)

MacAsm is a software development system that allows programs ★★★ to be written in assembly language. Programmers can assemble, edit and test software, and an integrated resource compiler lets independent applications run from their own icons. $125. Mainstay, 28611B Canwood St., Agoura Hills, CA 91301. NCP

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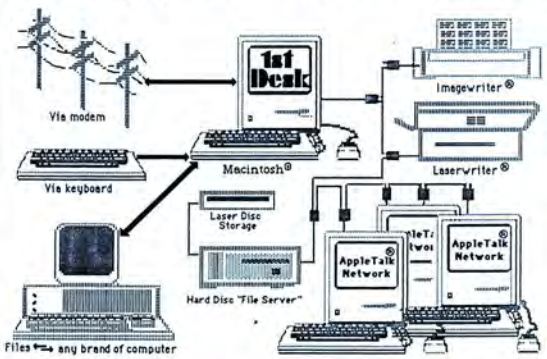

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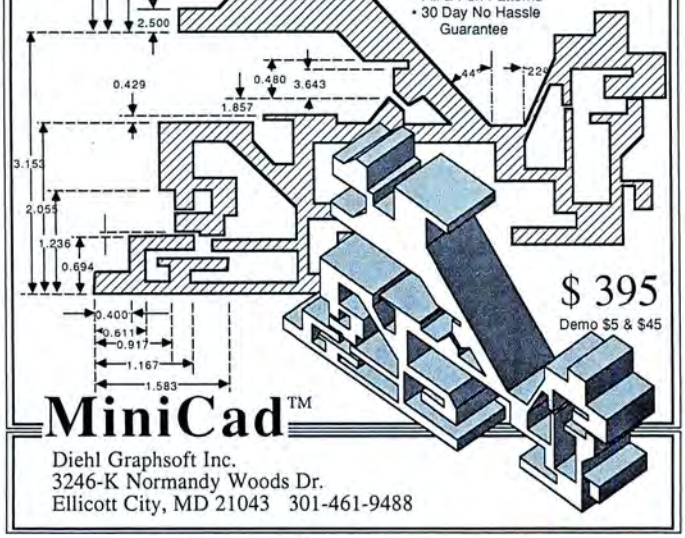

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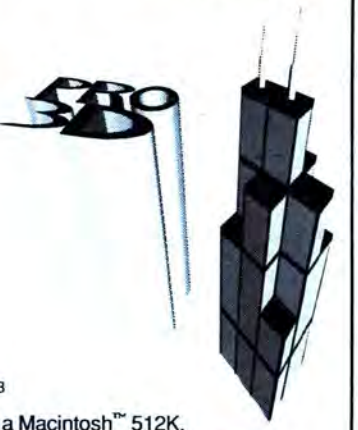

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Mac C is a good, highly Mac-oriented implementation of this popular development language. Assembler and linker built-in. $425. Consulair, 140 Campo Dr., Portola Valley, CA 94025. NCP

MacExpress is a development environment or shell. Programmers use it to save time and effort when developing standalone applications for the Mac. Easy to use for those with a strong technical background. $195. ALSoft, PO Box 927, Spring, TX 77383. NCP (Feb 86)

MacForth is an implementation of the popular Forth programming language. Level 1 is a simple, introductory version. Level 2 supports the Mac Toolbox fully. Level 3 extends the language to allow standalone applications. $149 (Level 1), $249 (Level 2), $499 (Level 3). Creative Solutions, 4701 Randolph Rd., Rockville, MD 20852. NCP

Mach II is a multitasking implementation of Forth that allows local variables and text files. Can create standalone applications. Several windows can be up with different operations in each, operating concurrently. Execution is fast. $99.95. Requires 512K. Palo Alto Shipping, PO Box 7430, Menlo Park, CA 94026. NCP (Apr 86)

Macintosh 68000 Development System is a fairly traditional assembly language package. The two-disk set provides an editor (*Edit*), an assembler, a linker, an executive and a resource compiler. $195. Apple Computer, 20525 Mariani Ave., Cupertino, CA 95014. NCP

Macintosh Pascal is Apple Computer's version of this very popular programming language. Loaded as it is with innovative teaching features, this interpreter is an excellent introduction to Pascal. The documents are mostly references, get a good tutorial textbook. $125. Apple Computer, 20525 Mariani Ave., Cupertino, CA 95014. CP

MacScheme is a LISP dialect with "artificial intelligence" capabilities. Has a large appetite for RAM. Interpreted language with Toolbox access limited to a small part of QuickDraw. $125. Semantic Microsystems, 4470 S.W. Hall St., Beaverton, OR 97005. NCP (Jun 86)

Megamax C is an easy to use, full version of C. Has a compiler, linker, disassembler, editor and much more. Good for beginners. Excellent documentation. $299.95. Megamax, PO Box 851521, Richardson, TX 75085. NCP

Microsoft BASIC was the Mac's first programming language. This interpreter (it's not a compiler) now supports the Toolbox and the whole Mac interface can be implemented in your programs. For nonprogrammers there are lots of programs available to run. $150. Microsoft, 16011 NE 36th Way, Redmond, WA 98052-6399. NCP

Microsoft Logo, from Microsoft's MacLibrary, written by LCSI. An excellent implementation of Logo, taking full advantage of the Mac's user interface. Uses three windows. Turtle looks like a turtle, and its screen actions are very precise. Windows can be resized and moved about. $124.95. Microsoft, 16011 NE 36th Way, Redmond, WA 98052-6399. NCP

Personal Prolog is an inexpensive and well-documented program. Has no debugging or search and replace facilities, making it a more appropriate tool for learning than development. Documentation and use of Mac interface are excellent. $64.95. Optimized Systems Software, 1221 B Kentwood Ave., San Jose, CA 95129. NCP

Prolog/m is a solid Prolog following the Edinburgh standard. Has extensive debugging facilities, but you may need separate *Toolbox* disk with 58 additional predicates. Only drawback: no true editing or printing facilities. $99.95. Chalcedony Software, 5580 LaJolla Blvd., Suite 126, LaJolla, CA 92037. NCP

QUED (Quality Editor for Developers) is the ultimate source code editor. Loaded with useful and well thought out features, it will make any programmer's life much easier. It is not a word processor, however. $65. Paragon Courseware, 4954 Sun Valley Rd., Del Mar, CA 92014. NCP (Mar 86)

TML Database Toolkit is an ISAM type database that provides fast and efficient administration of large data files in applications developed with *TML* compiler. Supports open multiple index files simultaneously. $89.95. TML Systems, PO Box 361626, Melbourne, FL 32936. NCP (Dec 86)

TML (MacLanguage Series) Pascal is a good Pascal compiler, capable of producing standalone programs. Can use most existing Lisa Pascal programs with only slight modification. Requires 512K. $99.95. TML Systems, PO Box 361626, Melbourne, FL 32936. NCP (Jun 86)

TML Source Code Library shows how to write programs that use custom definition routines, speech, serial drivers, split bars and other topics. Provided on three 400K diskettes. Requires *TML Pascal*. $79.95. TML Systems, PO Box 361626, Melbourne, FL 32936. NCP (Dec 86)

ZBasic is a fast interactive compiler capable of creating standalone applications that takes advantage of Mac's unique features and abilities. Includes *Edit*, *RMaker*, and *MacIntalk*. Requires 512K. $89.95. Zedcor, 4500 E. Speedway Blvd., Tucson, AZ 85712. NCP (Dec 86)

EDUCATION

ChipWits is a combination game and teaching tool. Players create programs to maneuver robots through a set of 8 mazes. The programs are written in *ChipWit*'s built-in icon-based programming language (IBOL). Now HFS compatible. $49.95. BrainPower, 24009 Ventura Blvd., Calabasas, CA 91302. NCP

KidsTime is a package of five quality educational programs for children between the ages of 3 and 12. The programs all have adjustable difficulty levels. Some use speech and one is a nice introduction to musical notes. Sparse documentation. $49.95. Great Wave Software, PO Box 5847, Stanford, CA 94305. CP (Oct 86)

MacChemistry is a two-disk set consisting of a titration program, a periodic table program, *MacNest* (a scrapbook with indexing), and a disk of *MacPaint* files. *MacNest* is of general appeal. $145. Fortnum, 31 W. Sierra Madre Blvd., Sierra Madre, CA 91024. NCP

MacEdge and **MacEdge II** each contain 8 reading or math drill programs for basic skills. Programs follow one of three formats, a bit contrived. Contrivances are design flaws — they require learning format as well as skill. $49.95 each. Think Educational Software, 16 Market St., Potsdam, NY 13676. CP

MacStronomy is a good package for novice sky watchers. Has expandable database of sky objects that can be customized by the user. New version is very fast. $75. Etlon Software, PO Box 649, Lafayette, CO 80026. CP (Apr 86)

MacType offers structured typing instruction. Can teach both standard and Dvorak keyboards. Features include certificates for reaching certain levels. Can be used in a multistudent environment. $49.95. Palantir Software, 12777 Jones Rd., Houston, TX 77070. CP

MasterType is proof that learning to type can be fun. In this arcade-style action game words descend from four corners towards the center ship; the user must type them correctly. Features 18 skill levels, tracks errors, recommends lessons and provides comparison scores. $49.95. Mindscape, 3444 Dundee Rd., Northbrook, IL 60062. CP

NotePro is an educational package that teaches users to organize and make best use of their notes. Consists of five well designed parts, which can be used individually or as a whole. $59.95. Learning Skills, PO Box 8038, Reno, NV 89507. NCP (Jul 86)

Score Improvement System for the SAT is a no-nonsense drill and practice session covering practice tests, vocabulary, reading comprehension, math and quantitative comparisons. On-line tutoring for wrong answers. $99.95. Hayden, 600 Suffolk St., Lowell, MA 01854. CP (May 86)

Tellstar I & II are Mac astronomy programs. Have extensive databases, quick sky plotting and can locate specific objects. Level II has southern hemisphere star table, Messi-

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MINIFINDERS

er objects. $49.95 (level I), $79.95 (level II). Spectrum HoloByte, 1050 Walnut, Boulder, CO 80302. NCP (Apr 86)

Turbo Turtle is a turtle graphics program primarily designed as a learning tool for children. Uses Logo commands for graphics, but is not a full Logo implementation. Simple to use, good introduction to Logo for young children. $59.95. Hayden, 600 Suffolk St., Lowell, MA 01854. CP

ENTERTAINMENT

A Mind Forever Voyaging is a departure in text adventure games. It has a more extensive vocabulary and a more involved story than most of the genre. The story here is gripping, but there are only a few puzzles to solve. Requires 512K+. $44.95. Infocom, 125 CambridgePark Dr., Cambridge, MA 02140. CP (Apr 86)

Airborne is a classic arcade-style game with "real" sound effects. The player defends against an assault from flying enemies. Game noises digitized from actual recordings. $34.95. Silicon Beach, PO Box 261430, San Diego, CA 92126. CP

Alter Ego simulates the entire lifetime of a fictional character. The player's reaction to each multiple-choice event shapes the character's future relationships, job, health, etc. Spectacular the first time you play; after that there are too many similarities to previous characters. $59.95. Activision, PO Box 7287, Mountain View, CA 94039. CP (June 86)

The Ancient Art of War gives users a chance to refight some famous campaigns on both strategic and tactical levels. Campaigns can also be designed from scratch. Very playable, addicting game. Requires 512K+ Mac. $49.95. Broderbund, 17 Paul Dr., San Rafael, CA 94903. CP (Apr 86)

Archon pits the forces of Light against Dark in a quest to gain control of five Power Points on a checkerboard grid. The shifting cycles of squares' colors keeps the balance of power ever-changing. One or two players. $44.95. Electronic Arts, 2755 Campus Dr., San Mateo, CA 94403. CP (Oct. 86)

Balance of Power is the world's first computer peacegame. This simulation allows players to become either the President of the United States or General Secretary of the Soviet Union. Extraordinary artificial intelligence routines and general play make this a classic. $54.95. Mindscape, 3444 Dundee Rd., Northbrook, IL 60022. CP (Prem)

Borrowed Time casts players as detectives who have to solve their own murder — before it happens. This game requires players to think and act like a detective to solve the game. Good sentence parser, sketchy Mac interface. $44.95. Activision, PO Box 7287, Mountain View, CA 94039. CP (May 86)

Bridge 4.0 provides three other players and the cards for a game of rubber bridge. It's an average (Goren) bidder and a less than good card player. Good if it's the only game in town. Plays slowly since it's written in BASIC. $29.95. Artworx Software, 150 N. Main St. Fairport, NY 14450. CP (Sep 86)

Dark Castle is an outstanding achievement in action games which integrates RealSound with superb animation and graphics. You'll need better-than-average hand/eye coordination, but it's well worth the effort. Requires 512K+. $39.95. Silicon Beach, PO Box 261430, San Diego, CA 92126. NCP (Feb 87)

Deja Vu: A Nightmare Comes True is a graphic adventure that breaks new ground. Innovative use of the Mac interface in truly playable and exciting game. A great introduction to graphic adventure games. $49.95. Mindscape, 3444 Dundee Rd., Northbrook, IL 60062. CP (Jan 86)

Dinner at Eight is a useful recipe filing system that includes a collection of recipes from a nationwide sampling of restaurants. Users enter number of diners and program scales recipes accordingly. $59.95. Rubicon, 6300 La Calma Dr., Austin, TX 78752. CP (Jan 86)

Dungeon of Doom is a fairly standard, *Ultima*-type adventure game of the pick-it-up, cut-'em-down variety. Fun, if you like the type. Requires 512K. Version 4 is HFS compatible. Shareware. $25. If you like it. John Raymonds, PO Box 13, Pittstown, NJ 08867. NCP (Jan 87)

Enchanted Scepters is a surround sound graphic adventure game. It has a limited vocabulary and virtually no story. Offers extensive and varied scenes and utilizes the Mac interface to the fullest. A worthwhile adventure experience. $39.95. Silicon Beach, PO Box 261430, San Diego, CA 92126. CP (May 86)

Flight Simulator puts you at the controls of a small plane (prop or jet) and lets you roam North America. As difficult as real flying. Mac version has features not found on earlier versions, including spotter aircraft. Not all features available on 128K. $49.95. Microsoft, 16011 NE 36th Way, Redmond, WA 98052. CP (Nov 86)

Fokker Triplane is about as near to flying as you can get seated in front of a computer. Very realistic simulation and excellent graphics. Well designed and implemented. $59.95. Bullseye Software, PO Drawer 7900, Incline Village, NV 89450. CP (Feb 86)

Gato puts players in command of an American submarine in World War II. This superb simulation game uses all of the Mac's graphic capabilities to really make you feel that "you are there." $49.95. Spectrum HoloByte, 1050 Walnut St., Boulder, CO 80302. CP (Nov 85)

Grand Slam is an absorbing and realistic tennis simulation game. Practice or play tournament against Mac-controlled players with different styles and abilities on four different surfaces. 512K or Mac Plus. $49.95. Infinity Software, 1331 61st St., Emeryville, CA 94608. CP (Nov 86)

HardBall is a baseball simulation game complete with umpire's calls and crowd sounds. Great graphics and a lot of fun for fans. $44.95. Accolade, 20833 Stevens Creek Blvd., Cupertino, CA 95014. CP (Feb 87)

Leather Goddesses of Phobos is another in the long line of witty and entertaining Infocom text adventures. This one lets you choose your sex and comes with a 3D comic and a scratch 'n' sniff card. It has three levels of play: tame, suggestive and lewd. $39.95. Infocom, 125 CambridgePark Dr., Cambridge, MA 02140. NCP (Feb 87)

Lode Runner is a 150-screen action-strategy challenge that requires a joystick for truly effective play. Move around a grid of ladders and platforms collecting treasure; dig a hole to trap pursuers. Build your own challenges. $39.95. Broderbund, 17 Paul Dr., San Rafael, CA 94903. CP

MacGolf is a dynamic simulation of real golf. Players have a choice of courses and difficulty levels. Superb playability makes this a must for all golfers and gamers. Requires 512K+. $59.95. Practical Computer Applications, 1305 Jefferson Highway, Champlin, MN 55316. CP (May 86)

Mac Pro Football is a terrific sports simulation that gives you the chance to pit any combination of 38 Super Bowl teams against each other and direct team play. It comes with excellent, detailed (and necessary) documentation. Play selection can get a bit Byzantine. $49.95. Avalon Hill, 4517 Harford Rd., Baltimore, MD 21214. CP (Mar 87)

Make Millions is a fascinating business simulation in which the player competes against the computer to take control of five companies, then run them profitably. Appeals to the closet capitalist in all of us. $49.95. Scarborough Systems, 55 South Broadway, Tarrytown, NY 10591. CP

MazeWars+ is an interactive, multiplayer game to be played on AppleTalk or through a modem link. Chase opponents through a four level maze. Requires 512K+, AppleTalk or Hayes compatible modem. $49.95. MacroMind, 1029 W. Wolfram, Chicago, IL 60657. NCP (Nov 86)

Mind Over Mac features five games. Entertainment for the whole family. Good graphics paired with synthesized sound and on-screen help. $49.95. Think Educational Software, 16 Market St., Potsdam, NY 13676. CP (Feb 86)

NewGammon is animated backgammon that will challenge even good players. Features include variable skill levels and strategies and options to play the Mac or watch the Mac play itself. An arcade-like high speed mode is included. $39.95. Newsoft, PO Box 4035, Newport Beach, CA 92661. CP

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Here's just a small sampling of what The Power User's Manual will show you:

- How to use borderless objects in MacDraw as "erasers" (Page 68)
- How you can program the standard MacCalculator to solve equations (Page 33)
- How to know when to replace batteries, which ones to use and where to find them (Page 21)
- How to solve the problem, instantly, of disks that don't show a Bomb icon, but still seem unbootable (Page 1)
- How to manipulate very small images selected with the Lasso by "remote control," in MacPaint (Page 80)
- How to put additional Note pads on one disk, even if the Note Pad is already filled with information (Page 35)
- How to get your Mac to select text word-by-word instead of character-by-character (Page 10)
- How to automatically name cells to the right of their labels in Excel (Page 41)
- How to update your desktop file and save icon positions when you close a drawer in the HyperDrive (Page 56)
- How to use a single key to create menu dividing lines that don't indent from the left edge in Microsoft BASIC (Page 104)
- How to gain fast access to built-in fonts from the draft mode on the ImageWriter II (Page 60)
- How to keep both hands on the keyboard and still move from field to field in all dialog boxes (Page 4)
- How to generate a Tab character within a field (especially helpful for inserting tables) in Microsoft File (Page 108)
- How to emergency-exit using Switcher, in case your particular application "hangs" or "crashes" (Page 32)

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MINIFINDERS

Orbiter puts a real space shuttle on the Mac screen. A multitude of ★★★★½ controls, intelligent on-board computer with speech capabilities, real-time graphics and 16 distinct missions help this program succeed as both a game and a simulation. $49.95. Spectrum HoloByte, 1050 Walnut St., Boulder, CO 80302. NCP (Jul 86)

Orbquest is a fantasy role-playing adventure with better-than-★★★½ average puzzles and an excellent sense of humor. Not as sophisticated as some, but a good value. $49.95. QWare, PO Box 850415, Richardson, TX 75085. CP (Dec 86)

The Pawn is an unusual British interactive adventure game with ★★★ text and graphics. The unique interface has some drawbacks, but *The Pawn* has humor, social satire, is entertaining and is challenging. $44.95. Requires a Mac+. Firebird, PO Box 49, Ramsey, NJ 07446. CP (Mar 87)

Pinball Construction Set lets users create their own pinball ★★★★ games, as elaborate or as easy as desired. Uses *MacPaint* for backgrounds and has lifelike sounds (on 512K+ Macs). $40. Electronic Arts, 2755 Campus Dr., San Mateo, CA 94403. CP (Jan 86)

Psion Chess is as good a micro chess player as you'll find. This ★★★★★ 1984 World Micro Champion makes superb use of graphics and the Mac interface. Switch between 6 languages for a touch of spice. $59.95. Psion, 40 Lindeman Dr., Trumbull, CT 06611. CP (Mar 86)

Puppy Love is a combined game and teaching tool. As you teach ★★★★½ your puppy tricks and routines, you learn the basics of programming logic. Does not run from a hard disk. $19.95. Addison-Wesley, Reading, MA 01867. CP (Mar 87)

Real Poker is five-card draw against five other players with Old ★★★★½ West names, distinct personalities and playing styles, in a saloon setting. Dealing and play are very fast. Game evaluates your hand. $39.95. Henderson Associates, 980 Henderson Ave., Sunnyvale, CA 94086. CP

Sargon III is a chess program with 9 levels of play, problem-★★★★ solving modes, take back, hint, etc. Easy Play blocks *Sargon* from stealing search time during player's move, effectively doubling number of levels. Disk stores 107 classic games for review and replay. $49.95. Hayden, 600 Suffolk St., Lowell, MA 01854. CP (Mar 86)

Shanghai challenges players to clear a board of all 144 tiles, by ★★★★★ matching pairs of mah-jongg tiles and removing them. Terrific strategic options plus the ability to randomly generate new game boards keep this one fresh. $44.95. Activision, PO Box 7287, Mountain View, CA 94039. CP (Oct 86)

Skyfox is a sophisticated 3D shoot-em-up. You're fighting tanks, ★★★ planes, and enemy cities floating in the sky. Fast graphics, good sound, slick, on-board attack computer and many levels of difficulty will keep fans of this genre happy for hours. $39.95. Electronic Arts, 2755 Campus Dr., San Mateo, CA 94403. CP (Oct 86)

Smash Hit Racquetball is an accurate and entertaining simula-★★★★½ tion of a day on the courts. Digitized sound adds to the realism. Includes a hard disk install, unusual for a game. $14.95. Primera Software, 33 Norwood Ave., Kensington, CA 94707. CP (Dec 86)

Strategic Conquest is large scale, strategic conflict on the Mac. ★★★★ This very involved war game will be enjoyed by those who like this genre. $49.95. PBI Software, 111 Triton Dr., Foster City, CA 94404. CP (Dec 85)

Suspended is Infocom's most unique text game. Using a small ★★★★ plastic board and six markers, the player keeps track of six uniquely designed robots which check on damage to a complex's machinery and report back what they perceive as

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the problem. $49.95. Infocom, 125 CambridgePark Dr., Cambridge, MA 02140. CP

Tass Times In Tone Town is a slightly off-the-wall graphic adventure in which you need a flashy hairdo and a jumpsuit before you can get anywhere, and you pay for things with guitar picks. Decent puzzles, with a sense of humor. $39.95. Activision, 2350 Bayshore Pkwy, Mountain View, CA 94043. CP (Jan 87)

The Toy Shop is a construction kit for building 20 different working model toys. Some parts can be customized. Manual gives clear instructions, but many toys are too complex for a child to build. $64.95. Broderbund, 17 Paul Dr., San Rafael, CA 94903. CP (Nov 86)

Ultima III allows up to four characters to cooperate to explore the vast wilderness of Sosaria; dungeons, oceans, and the Moon Gates to help solve the adventure. $59.95. Origin Systems, 340 Harvey Rd., Manchester, NH 03103. CP

Winter Games lets up to eight players compete against each other in Olympic events including figure skating, bobsledding, biathlon and ski-jumping. Excellent animation, good graphics, good theme music. $39. Epyx, 1043 Kiel Ct., Sunnyvale, CA 94089. CP (Mar 86)

Wizardry is an outstanding dungeon exploration adventure pitting a party of up to six characters against the guardian monsters of the evil wizard Werdna. Even after solving the game, you'll want to go back into the dungeon. $59.95. Sir-Tech, 6 Main St., Ogdensburg, NY 13669. CP

WordPlay is a word game with over 50 crossword puzzles for different levels of expertise. User friendly, it offers on-screen Help menus. A Work mode allows development of new puzzles for the creative. $49.95. Palantir, 12777 Jones Rd., Houston, TX 77070. NCP (Mar 86)

Xyphus is a role-playing game pitting four characters (fighters or wizards) against multiple scenarios that grow increasingly harder. Excellent Mac interface and icon control. $39.95. Penguin, PO Box 311, Geneva, IL 60134. CP

Zork II is where the adventure continues in the underground empire. A wandering wizard keeps things interesting, though there's a way to beat him if you persevere. $44.95. Infocom, 125 CambridgePark Dr., Cambridge, MA 02140. CP

Zork III is the final chapter in the trilogy. Players come up against the ultimate enemy — the Dungeonmaster himself. More closed-ended than previous *Zorks*. $44.95. Infocom, 125 CambridgePark Dr., Cambridge, MA 02140. CP

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ConcertWare+ is an enhanced version of *ConcertWare*. Has different instruments and can use any four of a set of eight at any point in a piece. Can read and use *ConcertWare* and *MusicWorks* files. $69.95. Great Wave Software, PO Box 5847, Stanford, CA 94305. NCP (Nov 85)

Deluxe Music Construction Set is a good general purpose music program. An active piano keyboard and instant audio feedback make this program perfect for educational applications, and the advanced notational capabilities will satisfy most advanced musicians. $50. Electronic Arts, 2755 Campus Dr., San Mateo, CA 94403. CP (Mar 86)

Listen is an educational tool for ear training. It has both a piano keyboard and a guitar fretboard for the student to input notes, and offers a wide range of exercises. $69. Imaja, PO Box 638, Middletown, CT 06457. CP (Jan 87)

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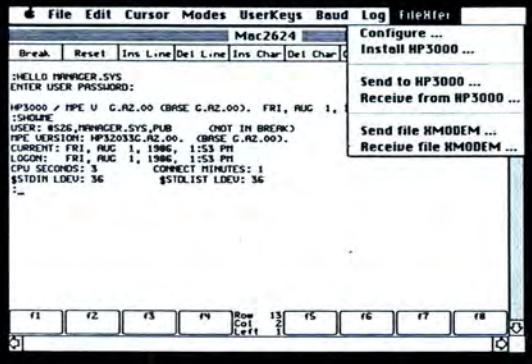

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MINIFINDERS

get this. Files can be transported to *Professional Composer* for editing. No direct track or segment looping. $295. Mark of the Unicorn, 222 Third St., Cambridge, MA 02142. CP

Professional Composer is aimed at music professionals. Pro- ♦♦♦ duces performance-quality sheet music; has only limited playback facilities. $495. Mark of the Unicorn, 222 Third St., Cambridge, MA 02142. CP (Prem)

Studio Session consists of two programs, and Editor and a Player, ♦♦♦♦ that produce music with six voices of digitized sound. Although the program is superb, documentation and technical support are poor. $89.95. The Kette Group, 6860 Shingle Creek Pkwy, Minneapolis, MN 55430. CP (Dec 86)

HARDWARE & ACCESSORIES

DASCH is an external RAMdisk available in half, 1 and 2M sizes. ♦♦♦ Connects to a serial port. Speeds up operations 200 to 300%. Can be used as a printer buffer. Works with all Macs. 512K, $395; 1M, $450; 2M, $545. Western Automation Laboratories, PO Box 3438, Boulder, CO 80307. (Feb 87)

Data Frame 40XP is a very fast, very quiet 40-meg external SCSI ♦♦♦♦ hard drive. Comes with a good and complete set of utility software. About as fast as a SCSI drive can be. Requires SCSI port, 512K+, new ROM. $1995. SuperMac Technology, 950 N. Rengstorff Ave., Mountain View, CA 94043.

Ergotron is a Mac (and external drive) holder that allows a full ♦♦♦♦ range of swiveling and tilting. Very strong, this well made unit is also very easy to use. $99.95. Ergotron, PO Box 17013, Minneapolis, MN 55417.

FX-20 is a good 20-meg external hard drive. Good utility software. ♦♦♦♦ Reliable, and reasonably quiet. Sits next to Mac, has a large, oddly shaped case. Requires SCSI port, 512K+, new ROM. $1199. General Computer, 215 First St., Cambridge, MA 02142. (Feb 87)

Hard Disk 20 is Apple's entry in the exploding hard disk sweep- ♦♦♦♦ stakes. This quiet, small unit uses Apple's new Hierarchical File System (HFS). The lack of utility software (spooler, backup, security) is its only drawback. $1199. Apple Computer, 20525 Mariani Ave., Cupertino, CA 95014. (Feb 86)

Hard Disk 20SC is Apple's 20-meg SCSI hard disk. Reliable, fairly ♦♦♦♦ noisy unit. Good utility software, but no backup yet. Requires cable and terminator ($80). Requires SCSI port, 512K+, new ROM. $1299. Apple, 20525 Mariani Ave., Cupertino, CA 95014. (Feb 87)

HyperDrive HD20 is an internal 20-megabyte hard disk. It only ♦♦♦♦ adds about 5 pounds to the Mac's weight. Full featured unit with spooler, security program and backup utility. It could use memory a bit more efficiently. $1695 installed in a 512K+ Mac. General Computer Company, 215 First St., Cambridge, MA 02142.

MacBottom HD21 is a very low (about 2 inches high), external 20- ♦♦♦♦♦ meg hard drive. Fits under the Mac. Very quiet, very reliable. Good utility software, including *HFS Backup*. Requires SCSI port, 512K+, new ROM. $1195. PCPC, 6204 Benjamin Rd., Tampa, FL 33614. (Feb 87)

MacCharlie's components slip around the Mac and convert it into ♦♦♦♦ an IBM PC clone. Amazingly, it works well. The enlarged keyboard has a few bugs but is a joy to use. $795 with 256K RAM and one floppy drive. $995 with 640K RAM and two floppy drives. Dayna Communications, 50 S. Main St., Salt Lake City, UT 84144. (Dec 85)

MacIntizer is a graphics tablet and absolute positioning device ♦♦♦♦ that replaces the mouse. Various scales are possible. $599. GTCO Corp., 7125 Riverwood Dr., Columbia, MD 21046.

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MacNifty Sound Digitizer turns ordinary analog sound input into ★★★★½ digital waveforms which can then be manipulated using the *SoundCap* software it comes with. Capable of truly stunning effects. Requires 512K+. $129.95. Impulse, 6860 Shingle Creek Pkwy., Minneapolis, MN 55445.

MacNifty Stereo Music System converts Mac sounds to simulat- ★★★★½ ed stereo. User controls bass, treble, balance, and volume. $79.95. Impulse, 6860 Shingle Creek Pkwy., Minneapolis, MN 55445.

MacNifty Switch allows any port on your Mac to connect to two ★★★★ peripherals. Turn the knob to switch between the two devices. $34.95. Impulse, 6860 Shingle Creek Pkwy., Minneapolis, MN 55445.

MacTablet is a stylus-driven graphics tablet. Users can easily ★★★★ sketch or trace art using this absolute-positioning device. Has a working area the size of the Mac screen. Allows concurrent use of the mouse. $495. Summagraphics Corp., 777 State St. Extension, Fairfield, CT 06430. (Jan 86)

MacVision is a digitizer that uses an ordinary video camera for ★★★★ input. Capable of extremely fine results and special effects. Easy to use and well documented. $399.95. Koala, 3100 Patrick Henry Dr., Santa Clara, CA 95052.

Magic Digitizer is a hardware digitizer that works with video ★★★★ cameras. With *LaserMagic* software you can generate 300 dpi images (in PostScript). Requires 512K+. Digitizer with *Magic* software, $399.95; *LaserMagic* software, $49.95. New Image Technology, 10300 Greenbelt Rd., Seabrook, MD 20706. NCP (Mar 87)

Mouse Mover is a mouse pad-type surface that snaps on to the ★★★★½ bottom of the mouse like a roller skate, freeing it up to glide over desk or mouse pad with ease. 99 tiny ball bearings at three strategic points. Mouse glides faster and saves on mouse wear and tear. $19.95. Magnum Software, 21115 Devonshire St., Chatsworth, CA 91311.

MouseTop is unquestionably the cutest mouse cover on the ★★★★★ market. Gray, plush fur, round felt ears and button nose and eyes make your mouse look authentic. $5.49; $5.95 for MouseTop wearing wire-frame glasses. H&H Enterprises, PO Box 2672, Corona, CA 91718.

Moustrak is a fabric covered foam mousing pad. It will increase ★★★★ the efficiency of your mouse while helping to keep it clean. Pad comes in a variety of colors. Particularly useful in the typical office desk top environment. $10. Moustrak, 3047 St. Helena Hwy., St. Helena, CA 94574.

NoLabelSystem is a plastic permanent labeling system in which ★★★★ users slide new tabs into a transparent plastic case on the disk. The tabs stick out of the case slightly, making them easier to read while in the drive. $19.45. Weber & Sons, 3468 Hwy 9, Freehold, NJ 07728.

PenMouse+ is a low-end graphics tablet with a transmitter- ★★ equipped pen. Has a smooth "trade" mode for very precise drawings. Does not always track evenly, pen is hard to control and documentation is confusing. $295. Kurta, 4610 S. 35th St., Phoenix, AZ 85040. (Feb 87)

PhoneNet is an AppleTalk-compatible network. Network can be up ★★★ to 3000' in length. In-place unused phone cabling can be used for network, and can be combined with AppleTalk on same network. $49.95 per node. Farallon Computing, 1442A Walnut St., #64, Berkeley, CA 94709. (Dec 86)

ThunderScan replaces the ribbon cartridge in an ImageWriter, ★★★★ which is required to use it. Laser scans art that can be run through the ImageWriter, producing high-quality digitized images. The images can be manipulated as they are created. $229. Thunderware, 21 Orinda Way, Orinda, CA 94563.

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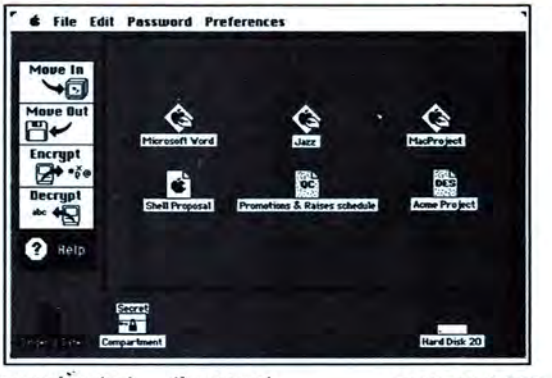

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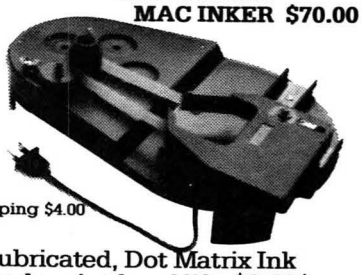

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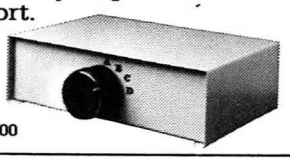

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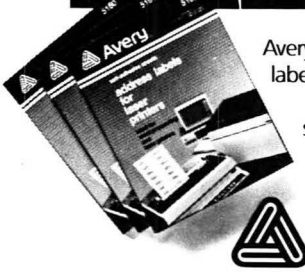

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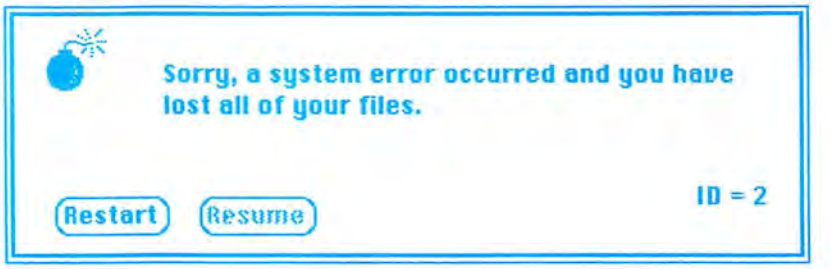

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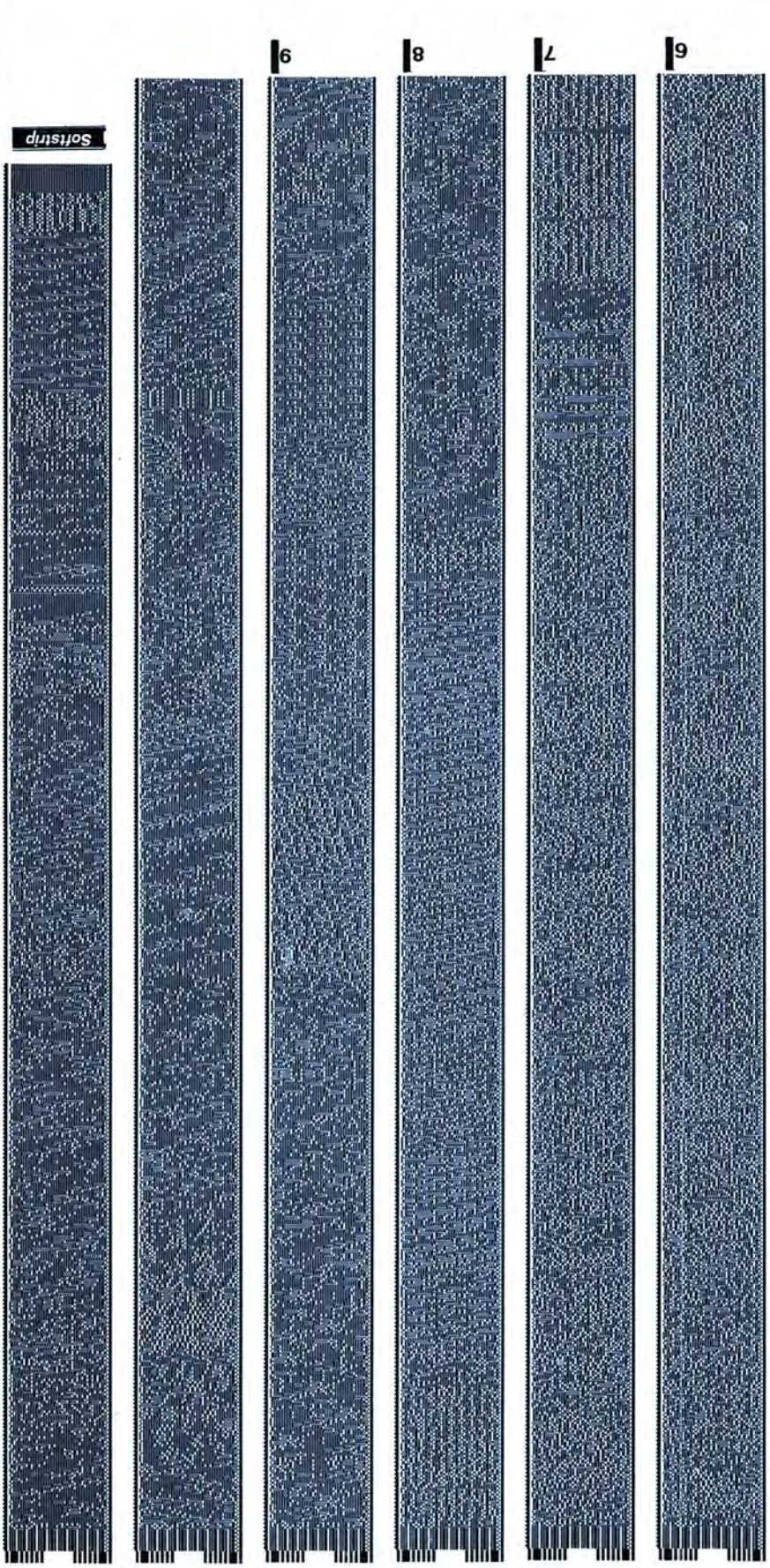

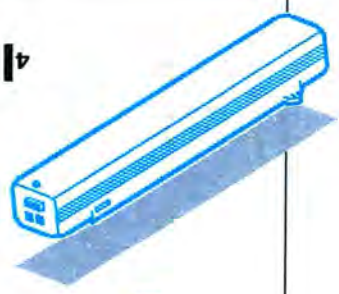

THE STRIP SHOW

This page contains Softstrips: programs and data in a special machine-readble form. The material can range from straight, unformatted data to full-blown Macintosh applications.

To use this material, you'll need a Cauzin Softstrip reader. Readers are available from your local dealer. Be sure you get the Macintosh accessory kit. They're easy to use, well made, and simple to store.

This month's strips are the rest of *StuntCopter 1.2*, an exciting public domain game. You'll need the strips in last month's *MacUser* to get a complete game.

StuntCopter is simple enough. The higher you are when you jump, the higher your score. But don't hit the horse or the driver! It was written in *TML Pascal* by Duane Blehm of Ulysses, Kansas. Programmers can buy copies of the commented source code direct from Duane.

We'd like to know how you are using these strips (if you are!), how you like the Cauzin Reader, and, most importantly, what you'd like to see us publish in strip format.

We will continue to publish strips containing source code from articles, but we'd like to go further. Do you want to see games or utilities? Standalone applications or source code to run or compile? Let us know. Write to S. Strip, c/o *MacUser*, 25 West 39th Street, New York, NY 10018.

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GET IT WRITE

(continued from page 79)

"Save changes before closing?" dialog box — every change you make is saved. The only way to revert to an earlier version of the document is to keep a backup.

Word Handler is sometimes very slow and occasionally exhibits the display problems found everywhere but in *MacWrite* and *Word*. Although *Word Handler* does have horizontal scroll bars so you can see the full page, like *MindWrite* it doesn't automatically scroll to display text. Thus there are times when you type blindly because what you are typing is beyond the window edge.

As I said at the outset, *Word Handler* is not great, but it is a darn good basic word processor, and at $79.95 is quite a value.

MICROSOFT WORD 3.0

Did I save the best for last, or is *Word* 3.0 here because it falls at the end of the list alphabetically? Yes.

Word 3.0 is a tough program to evaluate. Its feature list is ridiculously comprehensive — it's hard to imagine a feature you'd want to find in a word processor that isn't here. You want hyphenation? Automatic footnoting? Style sheets? Automatic indexing and contents creation? Built-in spelling checker? A glossary? Integrated outlining? The ability to handle odd paper sizes? Command key options that let you bypass the menu bar, the Clipboard and the mouse, if you like? It's all here and *that*'s just the beginning. Given all of that, why can't I say that everyone should go out and buy *Word* 3.0 without hesitation?

In the first place, *Word* 3.0, like the other *Word*s before it, often doesn't feel or look or act like a Macintosh program. Every time I work with *Word* I get this strange suspicion that there's an IBM PC lurking under the hood of my Mac. One reason for this is that Microsoft insists on doing things their own way, instead of following the Mac standard. *Word* 3.0 at least has a font menu, not found in earlier versions, but in the version I had the font names are not in the order that you expect them to be, that is, they are not listed alphabetically.

At the time this article was written, Microsoft said that this issue was unresolved and may be corrected in the release version. I hope so. This is a big problem if you are a serious font user and you have to search through a long list for the font you want. Many things *Word* 3.0 does are nonstandard, like the default display that shows nonprinting characters (paragraph symbols and little dots between the words) on startup. Yuck. And it still doesn't paginate properly.

The second problem for me, and this is related to the first, is that *Word* 3.0 is too complicated. Microsoft is aware of this, and even provides a "Short" or "Full Menus" option that keeps the true power of *Word* hidden until you want and know how to use it. Still, it takes a *tremendous* amount of effort to figure out this program and make use of its multitude of features. Dialog boxes and preference boxes often take up the entire window, with more choices than you know what to do with.

Here's another example: columns. I mentioned columns before — I'm not sure they belong in word processors, but if they do they should be easy to use. Not so in *Word* 3.0. The on-screen Help file has a description of how you work with multiple columns that defies belief. Anything that difficult to explain is too complicated.

Finally, (and this may only have happened because the version I had to review was still a beta copy, not a release version) *Word* 3.0 is a memory hog and scared me royally once because of it. I was trying to load a long article written with *Word* 1.05. The wonderful little watch cursor came on as did the red access light on the hard disk. Then my disk started a rhythmic grinding pattern that cycled itself every 10 seconds. It quietly went into a loop with no sign of coming out of it. Fortunately when I shut down the Mac everything turned out all right, but it gave me quite a fright.

Word 3.0 should have been the best of the lot, and in many ways it does outshine every other word processor. I congratulate Microsoft for creating such a powerful product. But... but... but....

AND THE WINNER ISN'T

As much as I hate to say this, I think the definitive word processor for the Mac is yet to be seen. *Laser Author* and *Word* 3.0 had a shot at the title, but didn't quite come through. The other three reviewed here, *Word Handler*, *MindWrite* and *WriteNow* almost qualify as niche word processors. At least developers are now working on word processors for the Mac. Maybe this year. In the meantime, this article was written with *MacWrite* 4.5.

MICHAEL D. WESLEY IS THE WEST COAST EDITOR OF MACUSER.

LASER AUTHOR

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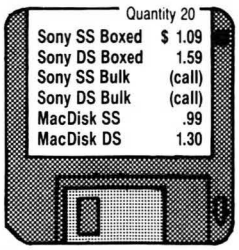

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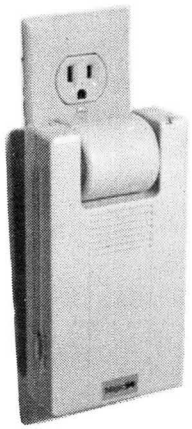

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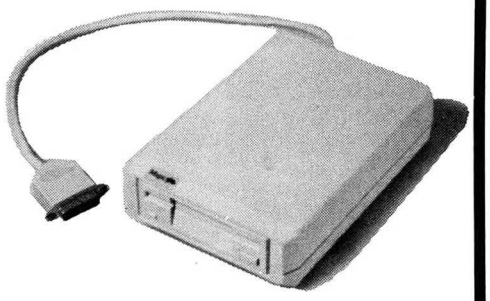

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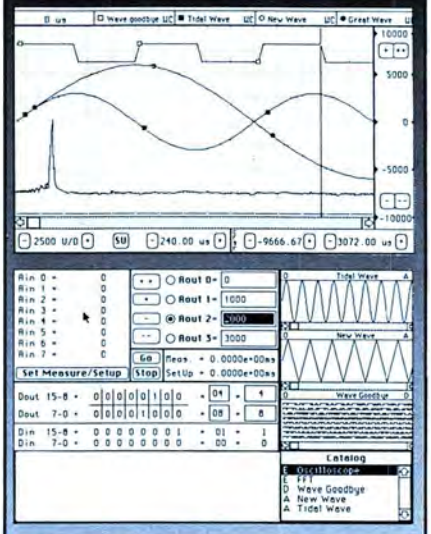

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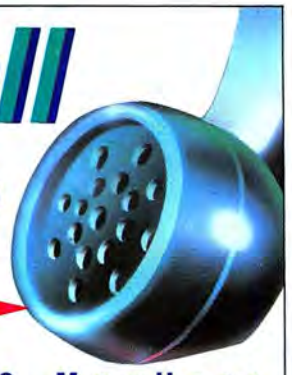

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by John C. Dvorak

IS THERE A FUTURE FOR APPLE COMPUTER?

It happens every day. A father takes his young son to Pearl Harbor and the kid always asks him who won the war. The dad, irked by this question, says, "We did. Otherwise you'd be speaking Japanese!" The kid didn't know. They don't teach him about such things in school anymore. When he looks around his little world it seems that the Japanese won. They make all the best things in life, don't they?

If the War were fought today, most Americans doubt that we could defeat the new Japan. Its atom bombs would be cleaner than ours and come equipped with "How Did You Like Our Product" postcards that would drop from the sky and ask questions like "Where did you hear about us?" and "How many in your family died?"

Thank goodness they are only kicking our butts in the world of manufactured consumer goods.

Does this sound defeatist? You bet it does. I get this way when I think about how our companies have deteriorated under the tutelage of today's financial types. As critic David Halberstam points out, our corporations are interested in profits, not products. The manufacturing pro has become a second-class citizen in this country. Bean counters rule. It's the accountants, the MBAs, the financial types who run things. The result is what you see.

Apple, to me, epitomizes much of this downturn. I don't like what I see there, either. For example, the other day I was quietly thinking about all the products I owned that had the Sony brand name. Sony is roughly twice the size of Apple, but a couple of years ago Sony was about the same size as Apple is now. So let's say the two companies are comparable. The difference is that Apple is a profit-oriented company and Sony is a product-oriented company.

Look at what a company like Sony produces (most of it invented and engineered by Sony). There's the Trinitron TV that was the first high-quality color TV that didn't need constant adjustment. Sony invented and popularized the video cassette recorder. Sony makes consumer electronics products, phones, video projectors, broadcast video equipment (pioneering helical scan recorders and new Betacam technologies), computers, state-of-the-art speakers and audio components, CD players, projection TVs, XBR TV monitors, disk drives, Walkmans, miniature television sets, car stereos...stop me!

So what has Apple done? It's made money and produced a few products: the Apple II and its clones, the Apple III, the Lisa, the Mac and, uh, some software. The one time Apple tried to get inventive was with its defunct "twiggy" 5 ¼-inch disk drive and weird diskette. It proved unpopular and so Apple had to adopt the 3 ½-inch disk. The 3 ½-inch disk was invented by Sony.

While I hate to fault Apple for turning a profit, its precarious reliance on a few products and its failure to invent anything new are hardly the ingredients for long-term success in the competitive world of high technology.

Because of this one-dimensional approach towards its business, Apple has to have a flawless game plan. One marketing blunder and Apple could be in big trouble. This realization is why the company choose marketing superstar John Sculley to run things. Forget about producing new products, let's merchandise what we have and let the Japanese be imaginative and creative. Ours is the mentality of the over-the-hill champion boxer who will only fight easy-to-beat stiffs.

Unfortunately, it seems that recent marketing decisions by Apple are hardly worth textbook exemplification. Apple's no-show at last Winter's COMDEX was an incredible blunder. Apple was seen as the leader in desktop publishing and then didn't appear at the primary dealer show where the theme was (you guessed it) desktop publishing. If you didn't keep on top of things (a notorious habit of dealers), you'd think IBM invented desktop publishing. Talk about dropping the ball.

Even its new ads fail to communicate the strengths of the company. The ads that are supposed to show off the Macintosh's ability to produce incredible output via the LaserWriter are unclear and generalized. Not once is the LaserWriter shown producing output. There is a guy bragging about how his nifty reports are done by the new computer. But it's never clear that the near-typeset quality output was done by the computer, too. It sounds like only the number crunching and word processing was from the Mac.

Apple's new ad agency, BBD&O, violates the old principle "show them, don't tell them." The new ads are "tell them, don't show them." Seasoned business people look at the new ads and hear hot air.

What do you expect? Apple, not unlike most of American industry, is run by financial types. Yuppie pros. They aren't product oriented — they don't know what to show off.

Apple's model for all this is Xerox. Ask anyone who knows anything about the great unmarketed inventions dreamed up by the geniuses at Xerox's Palo Alto Research Center. None of the products ever see the light of day. All of them are nixed by droll bean-counters.

Apple is no different. With a similar close-to-the-vest attitude, it's no coincidence that Apple's inspiration for its Macintosh is from Xerox — the Xerox Star. Too bad the model for inventiveness and its new product introductions comes from Xerox, too. Maybe it's time we took our cues from Japanese companies.

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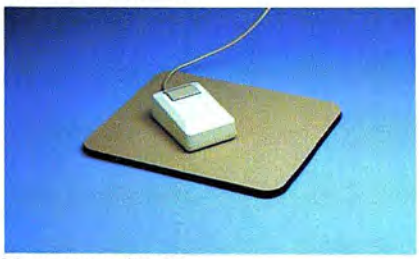

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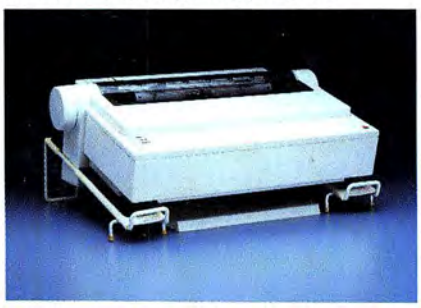

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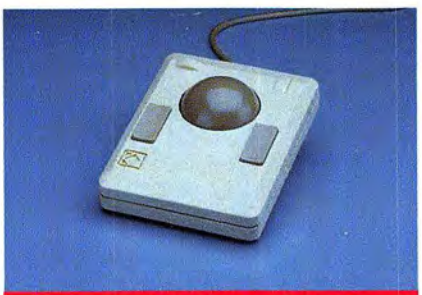

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