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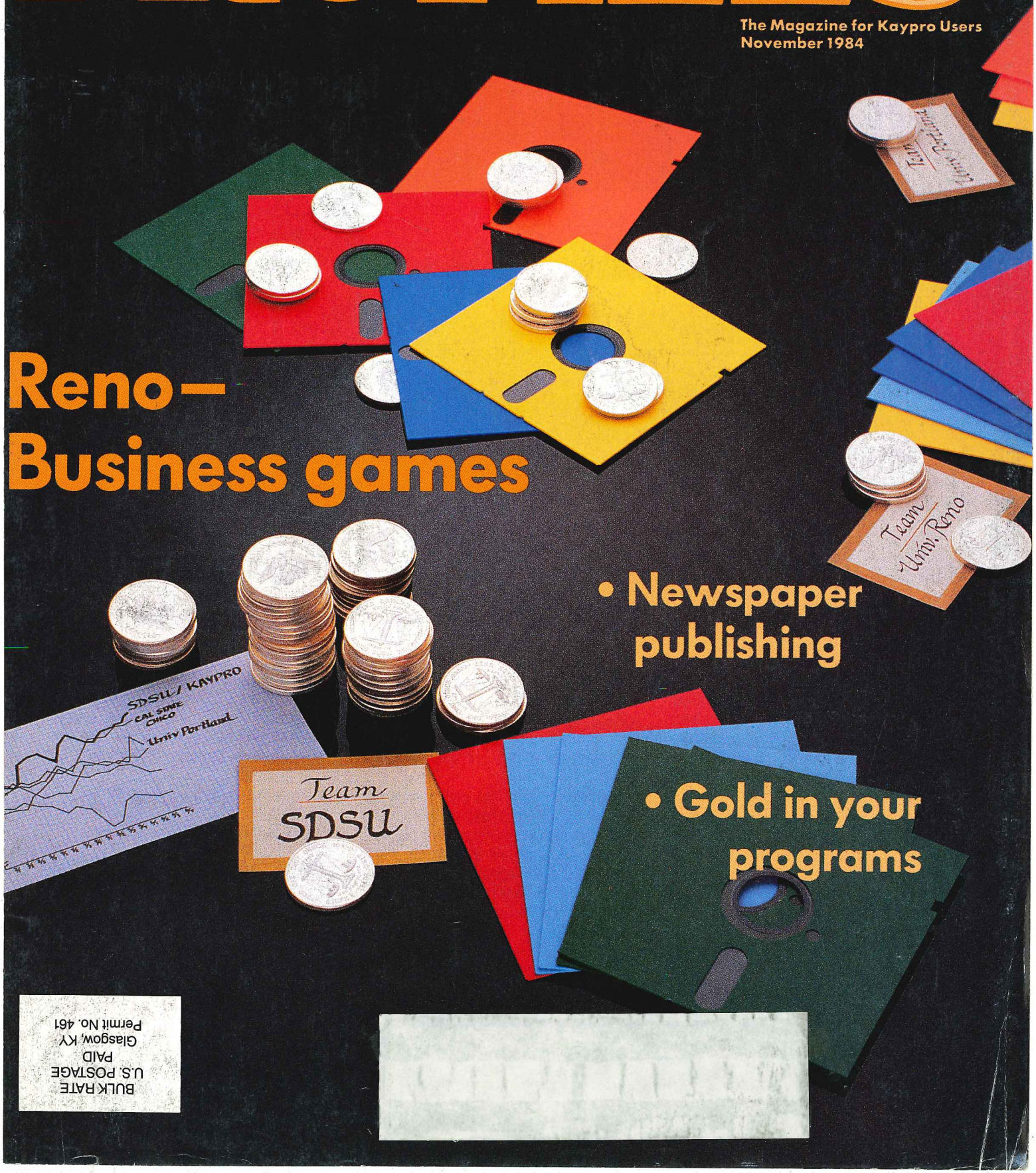
PROFILES

The Magazine for Kaypro Users
November 1984



Reno—Business games

- Newspaper publishing
- Gold in your programs

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WHAT A FLOOD IN OKLAHOMA TAUGHT US ABOUT RUGGED PERSONAL PRINTERS.

You can't keep a good printer down. After heavy rains and flooding washed through a Tulsa auto parts store, they left behind extensive damage, three feet of grimy water, and a totally submerged Okidata Microline printer.

"We thought that printer was a real goner," explained Jim and Jeannie Butler, owners of Butler Compu-Systems, "but we bought two gallons of pure alcohol and took apart everything that would come apart."

They soaked it, scrubbed it, reassembled it, then crossed their fingers and plugged it in. After all that abuse, the Okidata printer did just what you'd expect from an Okidata printer . . . it printed.

In fact, it printed so well and the owner was so pleased that he wouldn't even accept a brand new replacement.

Leagues ahead in performance. Add another chapter to Okidata's reliability story. Okidata builds the most dependable printers there are, with a warranty claim rate of less than 1/2 of 1%.

Okidata builds the most versatile printers too. The Microline models print data at rates up to three pages a minute. There's an additional print mode for enhanced or emphasized text, and their letter quality rivals any daisywheel with full graphics printing capabilities.

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WHAT IF THE TORTOISE COULD ALWAYS BEAT THE HARE ?

ELECTRONIC RAM DISK

Tired of spending so much of your computer time waiting for programs to load, compile, recalc or sort? Check these time comparisons!!! Now a lowly Kaypro II or 4 running at 2.5mhz (alias Tortoise) can even out run a 4 mhz Kaypro 10 with Winchester Hard Disk (alias Hare).
*Benchmark test data (see below)

You'll find SUPERSPEED for all disk access action with this multiprocessing Electronic RAM Disk. Comes with memory space user selectable from 256K to 1 mb; has dual centronics connectors; optional external power supply design. This RAM disk can be configured as drive A or D; runs at 6mhz; operates as printer buffer while simultaneously storing and retrieving data to the RAM. This add-on will be a real time saving asset to your Kaypro 2, 4, 2-84, 4-84

Socketed without RAM chips **$199.00**
Assembled & Tested 256K, 512K, 1mb
..... **$CALL** for current price
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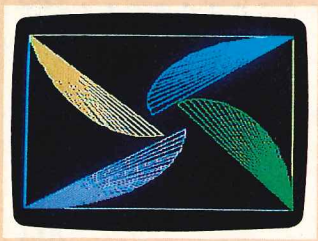
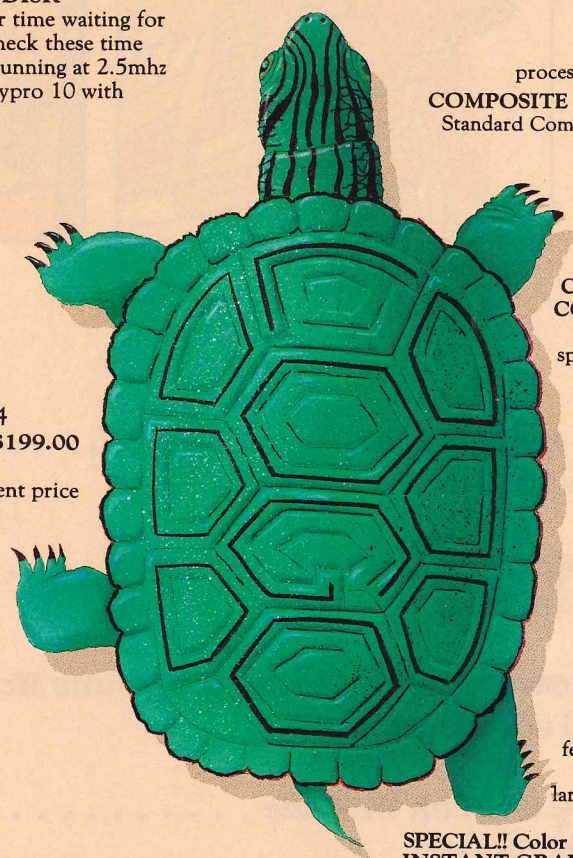
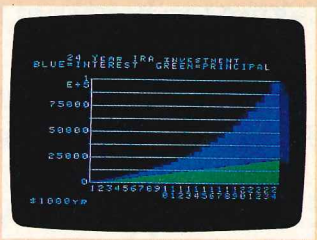




TLC® LOGO is also available for all Kaypros with internal graphics (2-84, 4-84, 10). No modifications required. This Standard Version uses the internal screen, has 16,000 pixel resolution, multiple turtles, multi-processing, vectors and many LISP commands . . . **$99.95**

COMPOSITE VIDEO GENERATOR — Allows connection of a Standard Composite Monitor. An absolute necessity for those who need a larger screen or bigger characters.
Kaypro II, 4 — **$59.95**
Kaypro 2-84, 4-84, 10 — **$89.95***
*Includes a new character set which generates a character cell size readable by a standard composite monitor. All graphics included.

COLOR GRAPHICS SYSTEM FOR KAYPRO
COLOR BOARD — for Kaypro II, 4, 2-84, 4-84, 10 & Robie. 256x192 Pixel resolution, 16 colors, 32 sprites. Software includes three editors, drivers, screen dump to printer and disk, six-month subcription to Micro Cornucopia. Generates standard composite color. RF modulator is required for color TV operation. Plug in installation . . .**$245.00**



COLOR BOARD SOFTWARE — TLC LOGO featuring multiple turtles, multiprocessing mode, fast, easy to use and easy to learn. This is the graphics language the schools rave about. There are many facets to TLC LOGO including LISP commands . **$129.95**

SPECIAL!! Color Board and Deluxe Version of LOGO . . . $299.95

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*Time in Seconds

	2.5 MHz Kaypro		4 MHz Kaypro		4 MHz Kaypro 10
	Floppy Disk	Ram Disk	Floppy Disk	Ram Disk	Winchester Hard Disk
Load Perfect Writer	8.37	2.46	7.64	1.76	6.57
Load Perfect Calc	10.35	3.16	9.44	1.87	7.19
Load Perfect Calc + 14KFile	12:04.01	3:33.26	10.48.00	1:51.08	6:20.37
Recalc 14K PC File	10:19.00	2:27.36	9.31.25	1:17.78	5:30.53
Page down PC File	25.24	8.01	22.49	4.32	17.55
Load LADDER.COM	10.90	3.31	9.38	2.12	6.60
WARM BOOT	2.82	.64	2.22	.46	2.69
Load M BASIC	5.79	1.64	5.43	1.12	2.55

As you can easily see even a 2.5 mhz Kaypro with RAM disk is faster than a Kaypro 10 using a hard disk. A 4 mhz Kaypro with RAM disk is significantly faster.

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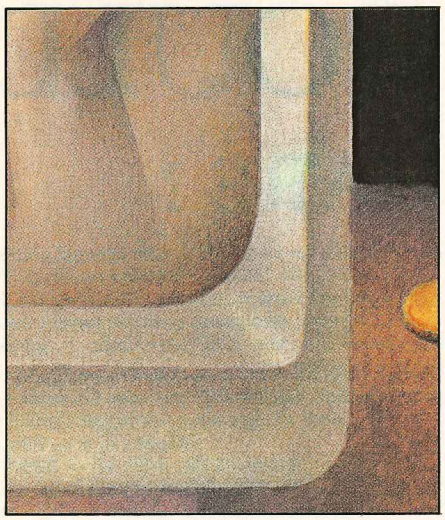

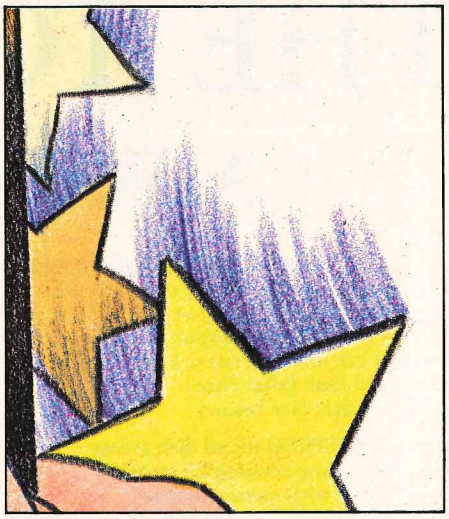

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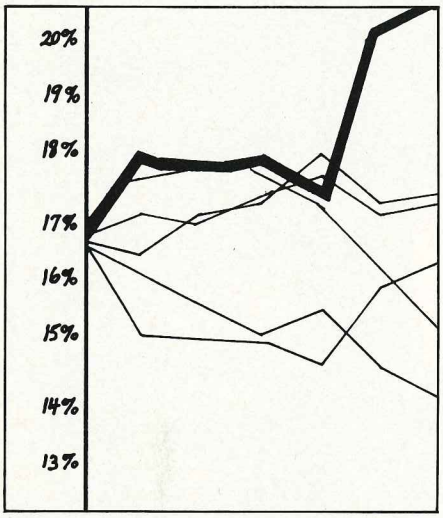
The Magazine for Kaypro Users
November 1984
Volume 2, Number 4



This team really gave the others the business.

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PUBLISHER
Geoffrey W. Soule

EDITOR
Tom Foote

SENIOR EDITOR
Terian Tyre

TECHNICAL EDITOR
Tom Enright

SUBMISSIONS EDITOR
Roxanna Li Wright

CONTRIBUTING EDITORS
David Gerrold
Dick Lutz

ART DIRECTOR
Eric Mattei

ART ASSISTANT
Joanne Ellis

ASSISTANT PUBLISHER
Gwyn Price

CIRCULATION
Stephen Phillips

EDITORIAL OFFICES
533 Stevens Avenue
Solana Beach, CA 92075
619-481-4353

ADVERTISING
Nancy Donabedian
249 S. Highway 101, Suite 321
Solana Beach, CA 92075
619-436-6112

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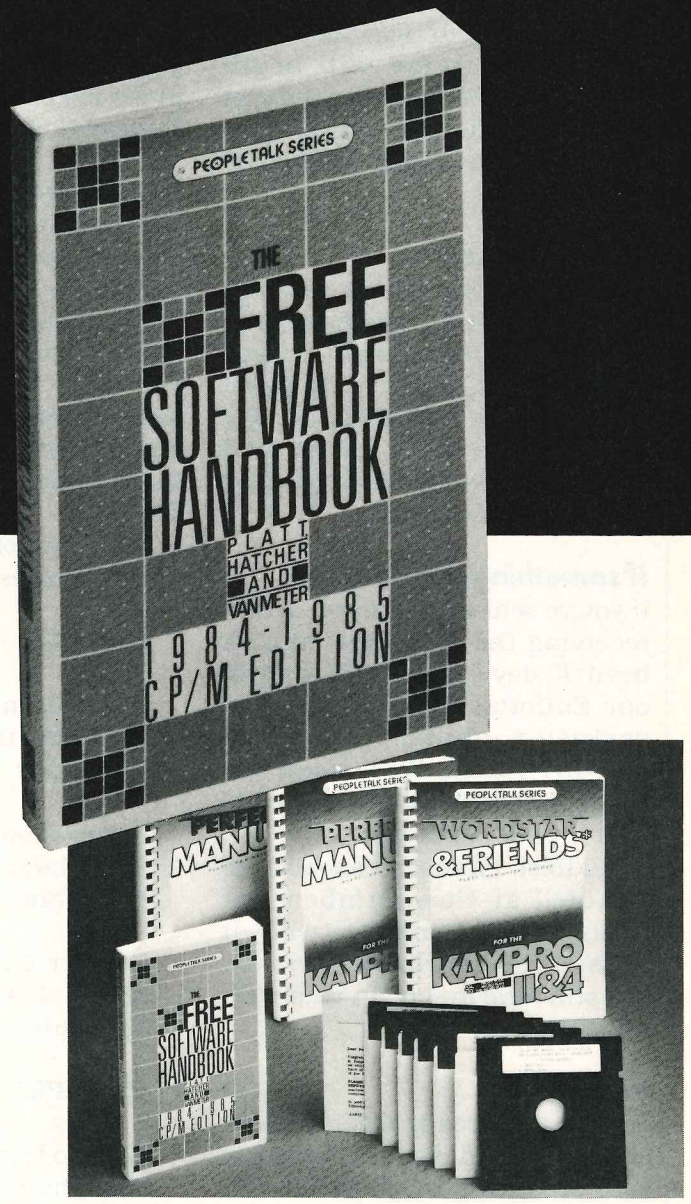

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For those in the United States, the situation is straight-forward: just send in your warranty card. Your subscription will begin within 60 to 90 days. For those of you who don't yet own a computer, see the coupon page later in this issue.

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There is no way for us to know which copy of the magazine was packed with your computer. *Your subscription begins when you receive your first issue in the mail* and has nothing to do with the complimentary issue packed with your machine.

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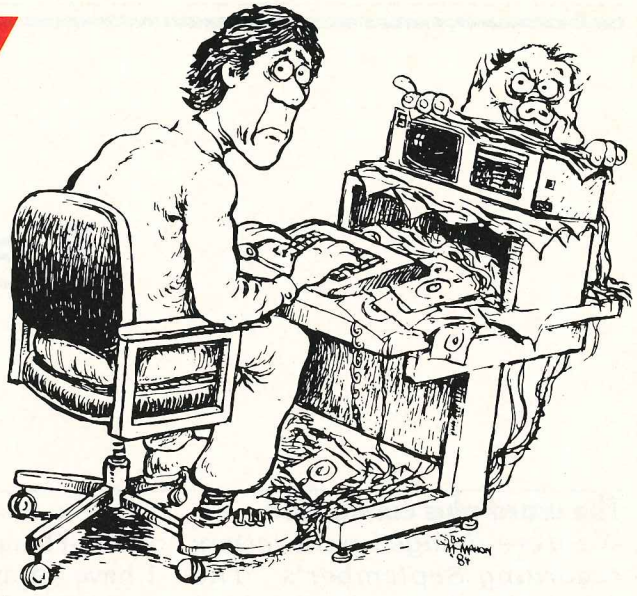
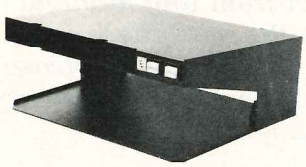


ELIMINATE the Evil Lurking around your Computer!!

Porta-Enemy No. 1

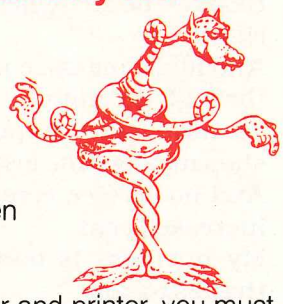
D.M. aka Deskus Messus
His M.O. is to clutter your desk with diskettes and paper to the point where you can't find anything.



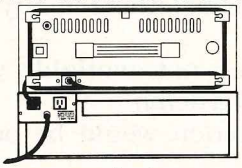
The **Porta-Micro Mate** (also known as the PMM) stores up to 20 of your most commonly used diskettes in the included plastic library boxes, as well as the keyboard, under the computer saving 1/3 of your desk space. The PMM's new sturdy steel base holds any transportable to a comfortable viewing angle.

DEALER INQUIRIES INVITED

Porta-Enemy No. 2



S.C. aka Switchus Contortium
A dangerous M.O. in that everyday when you come in to turn on your computer and printer, you must lean over in a contortionistic fashion to find the switches to both units.



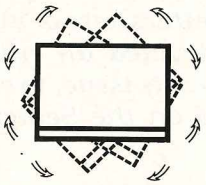
Two rear mounted power sockets allow you to plug-in both your computer and printer with just one wall connection.

Porta Enemy No. 3

S.G. aka Surgus Glitchem
The most dangerous of the three evils, S.G. can do the most damage, thats because a spike of electricity can be sent across the power line and *Strike* your computer when it's on.

The PMM has the surge protection built-in so it doesn't have to be added on to protect your equipment.

Available in two models, the PMM comes as a stationary unit or mounted on a swivel base for 180 degree positioning.



The companion aluminum printer stand completes the organized work area with bottom load paper feeding.

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Compatible with More Transportables

It Beats The Porta Enemies

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Letters

The word plus connection

We were deluged with letters regarding September's "The Word Plus Connection" which contained an error. Though many got it running and were pleased, many others had problems. Rather than print any of those letters here or in Q & A, we have devoted an entire piece, later in this issue, to clarify and expand on the September version.

Poetic justice?

I am the proud owner of a Kaypro 2
As a matter of fact I have two (that's a few)
To make out my bills, estimates, schedules
I find I can use Perfect Calc as a rule
To construct major programs Perfect Writer's the thing
I even use Kaypro for my key-punching
Upload to a larger computer—no mess!
And then (with such ease) . . .my data's processed
But please can you answer me—just tell me why
My cursor just hangs there . . .my disk drives they die
The power supply and logic boards were replaced
To my way of thinking that's quite a disgrace
A year-and-a-half is their age to the date
Yet we've found the most awful way to celebrate
Once a month just like clock-work, if I may explain
I have an appointment with my repairman, Wayne
He fixes, he struggles to get it just right
And allow me once more to sleep through the night
To have my computers in the shop means time lost
And no service contracts means increased cost
My business is booming much thanks to you
But I'm in a quandary as just what to do
I've interested others in buying a Kaypro
But mine's not available when they want a demo
My reputation would be on the line
If my recommendation was not perfectly fine
Help me please if you would (I know I'm not alone)
I don't want an Apple . . .Kaypro's my home!

Nancy B. Hirsch
Greenwich, Connecticut

Oh Nancy, Oh Nancy, how much you we fancy. And how antsy you make us to ansee. Can't see?
Dying disk drives, no problem
Just swap em and swap em
But your hanging cursor?
Have you seen a doctor?
Or had I better stop here—
For fear that I mocked her too much?
I couldn't resist,
But in all seriousness
sounds like you should go
to the experts at Kaypro
their number I know to be:

(619) 481-43 zero zero

And thank you so much
For a letter with punch
Perhaps I shall now see a bunch.

(Nancy, above I assume you have done your best to work out your problems with your dealer. And there are limits to what one can expect from any manufacturer once the machine is out of warranty. In any event, please let me know how you fare. Thank you.)—TF

Young word star

My name is Anthony. I am 9 years old. I like our new Kaypro Computer. I am using WordStar to write this letter. Can you send me a list of other games and programs?

Anthony A. Ingraffia
Chicago, Illinois

Thanks for writing, Anthony! I have a feeling that if you contact the good people of your local users' group, someone will not only give you lists of games and programs—he/she will be able to obtain diskettes already loaded with "public domain software" ("Software" means programs, and "public domain" means that the pro-

grams are themselves free; all you pay for are the diskette and copying costs). In the Chicago area, contact:

Mr. Doug Stevenson
KAYMKUG
2157 North Seminary
Chicago, IL 60614

Also, I find that the computer sections of major book stores are now bulging with excellent paper-bounds containing listings of all kinds of games and other programs. You, then, type these in using the "N = non document mode" of WordStar, then run/debug them with your language interpreter (for example, MBASIC's). Finally, if you're lucky, perhaps Santa Claus will bring your family a modem this Christmas. Modems allow you to dial into the many bulletin boards around, and download their programs right on to your diskettes—something like a library where you get to keep the book. Good luck, Anthony. And keep me posted on how it all works out.—TF

Gerrold and the inker

David Gerrold's reaction to the MacInker generated considerable ink from our readers. Though we will fight to guard the rights of our writers to call them as they honestly see them, we will fight even harder to assure ourselves we have been fair to all concerned. Publication of the following gives us that assurance:

I have just received, from one customer, a copy of David Gerrold's article in *PROFILES* on our MAC INKER. We have over 20,000 MAC INKER(s) in the field, and although we do not know him, Mr. Gerrold presumes to write that "The company (i.e. us) is very sensitive to bad reviews." I will go

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further than that—I'll say with Shakespeare to Mr. Gerrold: "Thy lips rot off." This is not a case of a bad review—opinions are opinions. This is a willful distortion of facts for what reason, we do not know.

We support to date, 535 different printers. *Some* original cartridges in two of them: namely the NEC 5500/7700 (not the NEC 3500), and the RS LP 5 have an excessive amount of ribbon mounted inside. This is a fact—one well known ribbon cartridge manufacturer produces now NEC Spinwriter cartridges which mount a ribbon four yards shorter than the original. A ribbon packed tightly inside a cartridge exerts pressure against the advancing mechanism and eventually the ribbon will jam. Jamming may occur sooner during or after re-inking, as the ribbon tends imperceptibly to increase in volume while it absorbs ink, thus further increasing the pressure.

The solution is simple—we mount (free of charge) one shorter ribbon into the original Spinwriter cartridges. We inform, of this possibility, all who order by phone and we send specific information to any who orders by mail a Spinwriter MAC INKER. The curious fact is that *not all* the NEC Spin Writer cartridges have the same performance and the problem can easily be solved. Today we had a call from a customer: Mr. Dave Clarke, John F. Kennedy Center, 1411 Oakland Dr. Kalamazoo MI 49008, who has set a new declared record: he has re-inked the same cartridge 80 times and he says that the printout is still better than when the ribbon was new. In our brochure we say 30 times. The point is that, even in the case of the Spinwriter, one reloaded ribbon cartridge will keep on printing . . .almost indefinitely.

We are sensitive to the truth and are quite happy to be insensitive to Mr. Gerrold. But anything in print is often assumed to be true, period. If you were to publish that I have sex with a zebra, there would be many who would firmly believe I do so, irrespective of the lack of evidence that I have ever committed or contemplated such intercourse. Or, to quote Charles Lamb: "The ear and the eye are quicker than the judgement" and "the public is often the dupe of public opinion, not its parent."

Hence this letter.

Jimmie A. Moglia
Director, Computer Friends
Portland, Oregon

I object to David Gerrold's column, "Up and Running," in the September 1984 issue of *PROFILES*. Although the entire piece smacks of pompousness, I feel that his negative report on the Mac Inker is misleading and vindictive. I have been using a Mac Inker and the same two fabric ribbon cartridges for about a year. My printer is the daisy wheel silver-Reed EXP 550, and although I haven't printed any 100,000-word novels, it has had a good workout through two writing courses, many drafts of many short stories, and all the accounting and inventory records of my small business. With local prices of ribbon cartridges at about $8.00 each, the Mac Inker has more than paid for itself. If it were to break down or wear out, I would immediately buy another.

C. G. Briggs
Binghamton, New York

When I read David Gerrold's

largely negative assessment of the Mac Inker in the September issue of *PROFILES* it caused me considerable distress . . . Then the real test: loading the apparently still parched ribbon on my Toshiba 1351. I printed out a page. The first few letters were light; the next few a bit darker, and then by the eighth or ninth line the print evened out. True, some of the letters seemed a little too heavy and dark, but after two more pages of printing that imperfection became indiscernible.

What had I done wrong? Beginner's luck? Perhaps. But it is also just possible that Mac Inker is a good product, that is, if one uses it correctly . . . By the way, this letter was printed using the same re-inked ribbon. Judge for yourself.

H. Keith Quincy
Spokane, Washington

Because the Toshiba ranks among the highest resolution dot-matrix printers around, it is certainly a mean test for any inker. The print quality of the above letter is excellent.—TF

I have had a different experience with the MacInker . I have never had a problem with an improperly inked ribbon, or a ribbon that stuck or jammed.

Alden Swan
Minot, North Dakota

It's nice to learn that others have had more success than I have. I'm sure the Mac Inker works well for some people. I don't know what I did wrong, but I tried with over 50 ribbons. I reported my experiences accurately. I had high hopes for the Mac Inker. The ribbons I re-inked jammed. I did not get my money's worth out of the product. I stand by my story.

David Gerrold
Los Angeles, California

Gerrold's was the only letter we received reflecting unsuccessful experience with the MAC INKER. Eager to get a bigger picture of how people have fared, we invite more letters.

I can't resist. What an opportunity to tell you of a great reinking technique a friend told me about—one which I have used with remarkable success: If your cloth (not film!) ribbon cartridge is one which lets you pop it open (e.g., the Epson cartridges), spraying the parched ribbon inside with WD40 will bring it back to life and lubricate your printhead! (WD40 is a lubricant/protectorant available at most hardware and auto parts stores.) Just lightly spray the ribbon as it sits bunched in the cradle, reseal the cartridge, put it in a plastic bag, and let it diffuse for a week or two (Experiment with one cartridge until you get it perfected). You ought to be able to do this four or five times per ribbon before having to add ink. Though the resulting print quality can't compare to the above Mac-Inked Toshiba letter, I find my WD40'd ribbons work just fine for draft work.

Surely more such tricks are lurking out there. Please write us about any you are willing to share. -TF

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Q & A

We welcome and read all your letters. Some of the letters are of general interest and are printed in the Letters column; others are pleas for technical help. Those questions that lend themselves to simple, concise answers are dealt with here, while the more advanced topics develop into articles or discussions in the Technical Forum.

Due to the volume of mail we receive, we simply can't respond personally to every request for assistance. For questions requiring an immediate reply, you can do what we often do: call Kaypro Technical Support at (619) 481-3920, or write to them at Kaypro Software Technical Support, P.O. Box N, Del Mar, CA 92014.

Quality question

We own a Kaypro 4'84 and are interested in Ellis Computing Inc's Fortran package. Have you checked out the quality of their product? How can we be sure that we will not be losing $39.95? Their advertisement states "Money back guarantee: you must be satisfied, or return the package(s) in good condition with the sealed diskette(s) unopened—within 30 days, and we'll gladly refund your money." How can an evaluation of their software be made without opening and running the diskette?

W. L. Deibert Tool Mfg. Co.
Huntingdon Valley, Pennsylvania

No, we have not checked the quality of their product. It is impossible for any magazine to vouch for all its advertisers. The time to do so just doesn't exist.

How can you be sure that you aren't losing your money? You can't. In any mail-order operation you have to rely on the judgement and reputation of the firm you are dealing with. Ellis Computing has been around for several years, and is still in business. That says something positive about them and their product. Unless my memory fails me, Ellis Computing was one of the first companies to offer low-cost compilers. Normally you could expect to invest several hundred dollars in a compiler.

If the documentation is not sealed in the same package with the diskette, evaluation is limited to examining the manuals. It is also possible that a "DEMO" diskette may be included for evaluation purposes. In that case the demo can give you some idea of the system's limitations. I would not expect a full implementation of the latest Fortran standards at the price Ellis charges. It may, or may not, be useful for your needs. You are the only person who can decide that. At $39.95, it is well worth the chance to find out; this is a small investment for any compiler.

Kaypro 10 puzzle

I really enjoy your Q & A department, which is very helpful to me, as I'm sure it is to many other readers. The question that I have been trying to get answered since I purchased my Kaypro 10 is, what does "System Status 02" mean? I get this message at the bottom of the screen sometimes when switching from drive A to drive B.

Lee Kimber
Tacoma, Washington

The "System Status XX" messages on the status line replaced the older messages, "Read Error on Hard Disk" and "Write Error on Hard Disk." While, at first glance, these messages may seem terrifying, they indicate problems only if resetting the computer does not make them disappear. The messages mean the system found a bad sector on the disk. In many cases the bad sector is what is called a "Soft Error," which means that it's not permanent. All hard disks have spare sectors which are used to replace any ones that develop permanent errors.

Your Kaypro came with a program called FINDBAD.COM on drive A, in user 0. It is a good idea to periodically run this program on both disks to lock out bad sectors. What FINDBAD does is read each block of sectors on the disk. If it detects an error, that block is put in a file called "[UNUSED].BAD" in user area 15. Once that has been done, the operating system will

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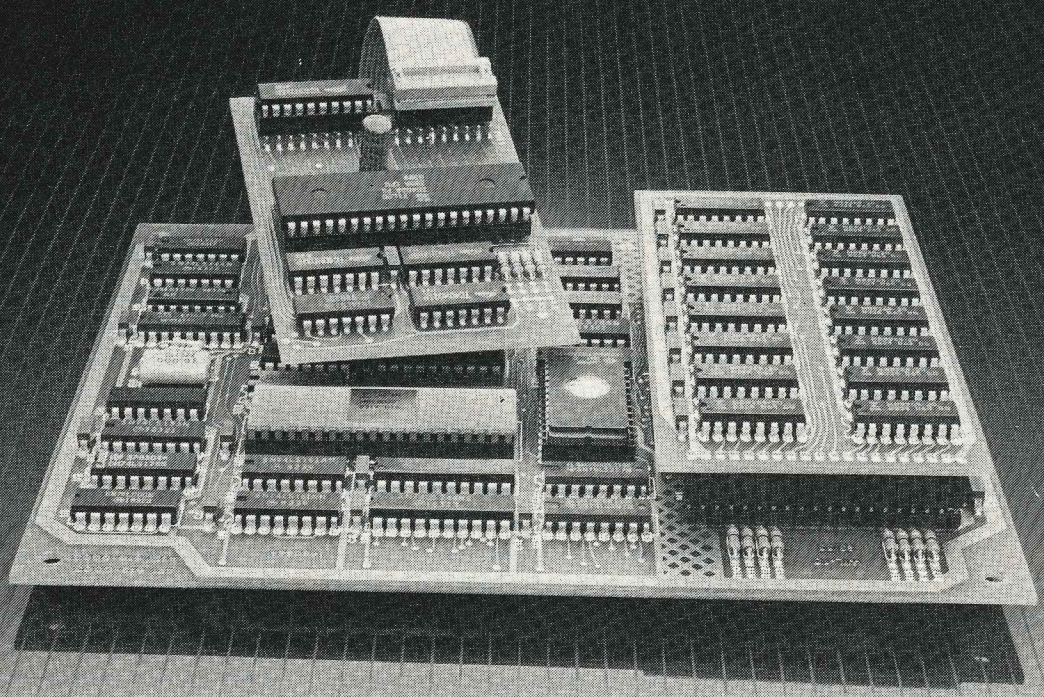

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not try to use that block again since it is allocated to a file. To run FINDBAD on drive B, enter the command "FINDBAD B:" and press RETURN. To run it on drive A, enter "FINDBAD" and then press RETURN.

Insurance software

I would like you to know that I have enjoyed reading you articles and editorials with regards to using my Kaypro 10 more effectively. Being in the insurance business, I need to keep an extensive calendar to keep up with all my renewals and clients. I also need to have a Real-Time Clock. I haven't found anything yet, can you help me out?

Robert L. Smith
Charlotte, North Carolina

Yes and no. You may want to get a copy of the Kaypro Software Directory, $25, from your dealer. Other directories of CP/M software are available from some of the larger bookstores.

To add a Real-Time Clock to your Kaypro 10, examine the advertisements in this magazine. However, it is unlikely that any over-the-counter management software will be able to access a Real-Time Clock that you have added to your machine. CP/M 2.2 does not support any time or date functions, and software you have purchased won't know how to access the board you have added.

Perfect & The Word Plus

The article by Michael Yard on "The Word Plus Connection" covered, in part, a subject I have bedeviled the local Kaypro dealer about without any success. How do I perform the same modification to Perfect Writer?

William N. Dillon
San Antonio, Texas

First you should read the Technical Forum in this month's issue. There are certain flexibility tradeoffs to Mr. Yard's modification. Secondly, I have no idea of where or how to perform the same modification to Perfect Writer. Due to the flexibility tradeoff, I would not make this change on my copy of WordStar. (Yes, your technical editor is a WordStar junkie.)

If you are merely concerned with conserving disk space, it is going to depend on what machine you have. If you have a Kaypro 4 or a 10, you can merely erase Perfect Speller and replace it with The Word Plus. The manual for The Word Plus lists which files are necessary and which files are extra. You will not be able to run The Word Plus from the Perfect Writer menu. And if you have a Kaypro 2, there is not enough disk space, so the two programs will have to remain on separate disks.

Kaypro 10 light pen

It has been a little over a year since I purchased a Kaypro 10 and it has performed rather well. When I bought the machine I was told that it had an input for a light pen. I have not seen any being advertised or sold. Is one available, will one be available "real soon now," or is the port just for show?

Hooi Wing Leong
Houston, Texas

I'm afraid it's just for show. The original design called for a light pen interface, but it somehow got pushed on the back burner. As far as I know it's been forgotten about. The best people to contact for technical information on anything like this is Micro Cornucopia. They may know of someone experimenting with a light pen interface for the Kaypro 10; I sure haven't heard of one.

WordStar/printer complaint

In the September issue, p. 21, Mr. Gerrold writes that "one of the more attractive features [of WordStar] is that it can be configured to take full advantage of the capabilities of most of the popular printers." Such a statement is quite true if one is dealing with six-year-old printers, but the program does not take advantage of the capabilities of any current printer I am aware of. It does not even accommodate the Juki 6100 which Kaypro is now selling (try printing all six special characters on the print wheel). For a recent dot-matrix, which produces headlines and many sizes of type, but not from horizontal spacing instructions, it is even more inadequate. That's why programs such as the one advertised on p. 22 are sold.

Daniel Eisenberg
Tallahassee, Florida

The only problem with your statements is that they are somewhat misinformed. Printers supported by WordStar are still manufactured, or in widespread use. MicroPro, along with most other software vendors, choose to directly support only the most popular printers. Asking them to support all printers on the market is not reasonable.

In the area of cheap printers, there are too many changes to

instruction sets, and attrition from poor sales, for any software vendor to keep up with them. Also, many of the cheap printers emulate commands of more popular printers. For example: the Juki 6100 emulates a subset of the commands for the Diablo 630. Many of the low-end dot-matrix printers emulate some of the Epson, Okidata, or C. Itoh instructions. The manufacturer sometimes does not publicize this fact because the general public, as opposed to the professional data processing community, could interpret copying of someone else's command set as an admission of poor quality. To make a cheaper printer, some of the more difficult features to implement are left out, which is why cheap printers don't emulate all features of the more expensive printers. Expensive printers cost more for a reason—capability and reliability. □

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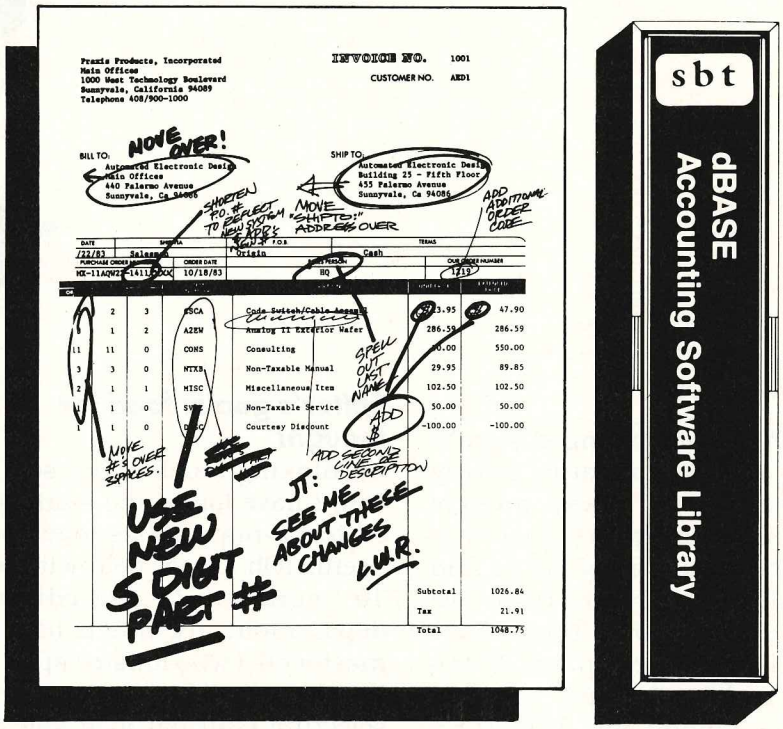

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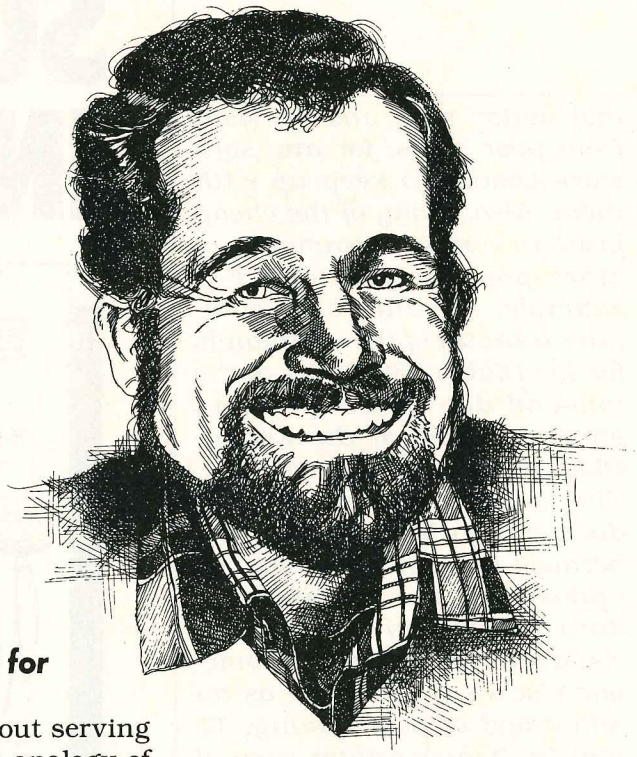

by Tom Foote

PROFILES has changed significantly in recent months; mostly for the better. I say mostly because I trust you will regret, as I do, the departure of Editor and Publisher, Tyler Sperry. In the two weeks I have known Tyler, I have found him to be exceptionally talented and bright, and, enviably popular among the *PROFILES* staff. Tyler, though we know you are off to do even better things, rest assured we will miss you. For me, yours will, indeed, be a tough act to follow.

New editor

Yes, I am your new editor and it's an honor to be here. The job has me working with extraordinary artists, photographers, writers, and microcomputer professionals (who all, by the way, went far beyond the call of duty to bring me up to speed—many thanks, guys). And it confronts me with the all-important responsibility to help reach and improve the "Kaypro lives" of roughly 100,000 creative people worldwide. In short, the heat is on to deliver writing which, above all, does well at serving *you*—our sustenance—you whose subscriptions and appeal to advertisers keep us afloat.

Editor's goals: food for thought

In thinking much about serving you, I have found the analogy of editorial-material-as-food to be useful. (Oh, please bear with me.) To begin, we in the editorial department are much like the master chef who mustn't spoil the broth. We are charged with selecting editorial food you will like. We then hammer and cut it into bits that are easily chewed. And we must spice it such that you'll enjoy eating and digesting it. If what we select is, in the long run, genuinely nourishing, it will, of course, give you strength, energy, and growth you might not otherwise have had.

To do well at this, we need nothing short of your hardest-hitting feedback about our past, and your creative suggestions for our future. That is, we heartily urge beginners, techie's and all in between, to write us answers to the following: Have we chosen the right ingredients for *you*? Are the pieces we have hammered and cut soft and small enough? Which pieces were savory? Which were tough or sour? Which gave you irreparable indigestion? Which have nourished you for the long run? In short, we hunger for your feedback because it helps us give you the meal you want and deserve. Bon appetit!

New publisher

The publisher's half of Tyler's job has been filled by a much-liked on-top-of-it-all tornado in the name of Geoff Soule. Geoff runs the bigger show of caring for the bottom line. With strong management skills, experience, and drive, Geoff gives us all faith in the magazine's financial future. (That's especially exciting to the editorial department because it means we'll be able to do more for you.)

Other changes

We have also stepped up to the same big time printer that *Time*, *Newsweek*, and other heavies use. This will allow us to print all the tricky stuff that they do (e.g., sophisticated reader surveys). Moreover, because the printer is strategically located in the country's distribution center (near the hub of Federal Express operations) you may even get your issues a little sooner. This coupled with a major revamping of

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our subscriptions operation (mentioned in Letters), should reduce subscription hassles—yours and ours—substantially.

Editorial changes

PROFILES' editorial staff of Tom Enright, Terian Tyre, and Roxanna Wright is, in my view, exceptional. And they have worked miracles at the time-intensive task of turning sow's ear manuscripts into silk purses. I received a hands-on feel for this intensity while hammering a bit myself on several of this month's feature articles (though much of this month's work arrived clean). Because the tail (certain writers) is wagging the dog (us), we hope to move from working harder and harder, to thinking smarter and smarter. More precisely, we will be much better off spending the above "miracle work" time on, among other things, attracting higher quantities of quality manuscripts. Action taken in this direction includes: 1) rewriting and continuing the "Writing for *PROFILES*" notice (new version appears in this issue); 2) writing detailed writer's guidelines to help those who send us queries to efficiently focus on what we want; and 3) publishing here, the very tentative themes under consideration for future issues.

Future themes

To offer readers a chance to react, and to give writers, artists, and photographers—past and potential— valuable lead time and direction, we take the unconventional step of sharing with you here the themes we are pondering for future issues. Though we reserve the right to change those themes, we feel that a tentative preview is better than nothing at all.

As we hope you will see by your own answers to the following questions, what we have planned follows an entirely logical and well-linked progression. If you disagree, please let us know. And the themes are . . .:

What would Kaypro users like to read about in the combined December/January issue? Right! "Christmas Presents: Peripherals, and Software." And how best to learn about your new toys (apart from subscribing to *PROFILES*)? Right! By joining one of the world's many "Users' Groups"—the theme of the subsequent issue. One big advantage of joining a users' group? Right again! "Public Domain Software"— the focus of the succeeding issue. After that initiation, we figure you'll want to knuckle down to—you guessed it! "Unique Applications of Kaypros to the Professions." But what happens after you've mastered the Kaypro in your profession? Why yes indeed! You become one of the "Famous People Using Kaypros." But knowing that fame on a Kaypro comes not without serious side effects, we will discuss "Microcomputing's Effects On American Life." Then with considerable guilt about that issue's provincial focus, we will follow it with an issue devoted to "Unique International Kaypro Applications." Looking into the future, we hope to offer an issue on "Microcomputing's Future: Likely New Technologies & Implications." Finally, realizing that the majority of Kaypro use involves word processing, we will struggle to sprinkle slick tips for word processing throughout the above. Indeed, don't be surprised if you see us slip in an entire issue on the subject.

Once again, because the above is tentative, don't hesitate to let us know where you think it should change. And if you feel you're

(continued on page 48)

ILLUSTRATION BY JOYCE KITCHELL

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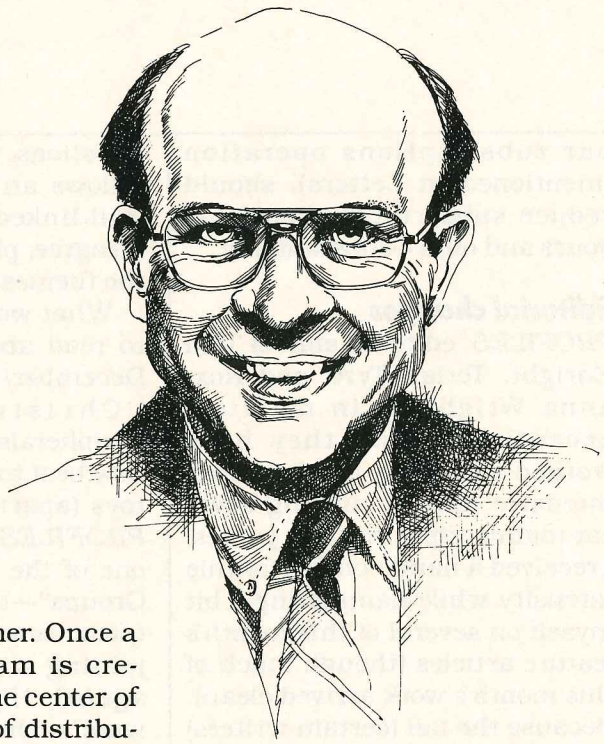

by Dick Lutz

Introducing a new column on public domain software:

I have before me two versions of SWEEP which illustrate the grand tradition of public domain software, and illustrate one of the frustrations, as well.

The grand tradition is: Use it, improve it, pass it on. I don't know when SWEEP was first written, or by whom. But fellow computerists have been touting it to me for a couple of years now, with good reason. The versions I have are identified by version number, by date, and by the name of the author: SWEEP version 3.8 is dated October 18, 1982, and is attributed to Robert Fisher of DePaul University, Chicago.

NSWEEP (for NewSWEEP) 2.06 carries a later date, April 20, 1984, despite the lower version number. It's identified with Dave Rand of Edmonton, Alberta, and marked with a © copyright symbol. (Producers of public domain programs sometimes copyright their work in order to have some recourse if it's exploited commercially, and then release it for nonprofit purposes.)

Going by version numbers, you might think Fisher's 3.8 is an improvement on Rand's 2.09. Or, judging by dates, you'd think the opposite. But we can't conclude that either version is a direct modification of the other. Once a public domain program is created and released at the center of a kind of spider web of distribution, it's subject to improvement and "improvement" by programmers at all points of the web. That's a source of frustration: you'd like to have the "best" version of a program, but there are dozens to consider.

There's an answer to this dilemma: Find a version you like, learn to use it, and stick with it. Carefully try others that fall into your hands and switch when you find something really better, but squirrel away a copy of the old version just in case you find bugs you didn't detect in your initial trials.

In the case of SWEEP, I'd been using the Fisher version when a copy of Rand's came along. Rand's has a broader set of capabilities, overall, except for one special strength in Fisher's, which will become clear in a moment. On the other hand, Rand's has a small bug, at least on my machine, which sometimes hangs up when I hit X to exit the program.

In Listing 1, the commands display shows what SWEEP is all about. The T (tag) command, in particular, puts power into your ability to manage disk space—something we all have to do sooner or later. Once you invoke SWEEP, it shows you the files on a disk for a given user number (or, in the case of Fisher's version, all users). You can tag the files for later mass copy (the M command), mass erasure (E), or both. To help you decide, SWEEP lets you view text files (V), shows you how much disk space is taken by what you've tagged (S). Along the way, you can delete (D) or copy (C) files singly, change disks (L), untag something tagged in error (U), and browse through the file list forward (spacebar) or backward (B). In a mass copy, you can designate disk drive and a user number other than the current user.

Tag is the command with real strength because it means you needn't issue an endless series of PIP or ERA commands. Tagging takes only an instant and when you've done your tagging, SWEEP will take over while you plan your next move. Or, if you wish, you can ask SWEEP to check with you before each erasure.

A word of caution: Tagging and using the mass erase command can be dangerous. Typing E

(continued on page 78)

ILLUSTRATION BY JOYCE KITCHELL

```
A0>B:SWEEP A:*.DOC *
                    SWEEP version 3.8 - October 18, 1982
                                  by Robert Fisher
                                     DePaul University
                                     Chicago, Illinois

Commands:       A:  Again. Retag # files.
                B:  Backup to last file.
                C:  Copy file with optional verify.
                D:  Delete file.
                E:  Erase all tagged/untagged files.
                L:  Login new disk and user and reset system.
                M:  Mass copy of tagged files with optional verify.
                R:  Rename file(s).
                S:  Space remaining on disk.
                T:  Tag file for transfer.
                U:  Untag a file.
                V:  View a file at console.
                X:  Exit to CP/M.
                ?:  Redisplay menu.
          sp or cr:  Next file.

Drive A*: 16 Files occupying  146k ( 204k remaining)

   1. A12:15-DISK .DOC    6k : T  Total of tagged files =     6k (    6k)
   2. A15:15-DISK .DOC    6k :
   3. A11:BACKUP  .DOC    8k : T  Total of tagged files =    14k (   13k)
   4. A14:BACKUP  .DOC    8k : T  Total of tagged files =    22k (   20k)
   5. A15:BACKUP  .DOC    8k :
   6. A14:BIGBURST.DOC    4k : T  Total of tagged files =    26k (   23k)
   7. A15:BIGBURST.DOC    4k :
   8. A15:CRC     .DOC    2k :
   9. A14:FLOPCOPY.DOC    2k : T  Total of tagged files =    28k (   25k)
  10. A15:FLOPCOPY.DOC    2k : T  Total of tagged files =    30k (   27k)
  11. A15:HEXDUMP .DOC    2k : B
  10. A15:FLOPCOPY.DOC    2k :*U Total of tagged files =    28k (   25k)
  11. A15:HEXDUMP .DOC    2k :
  12. A13:MODEM7  .DOC   38k : T  Total of tagged files =    66k (   63k)
  13. A15:MODEM7  .DOC   38k :
  14. A14:MULTCOPY.DOC    2k : T  Total of tagged files =    68k (   64k)
  15. A15:MULTCOPY.DOC    2k :
  16. A12:SWEEP38 .DOC   14k : T  Total of tagged files =    82k (   78k)

   1. A12:15-DISK .DOC    6k :*M  To drive and user (and v to verify): B15V

Copying A12:15-DISK .DOC =====) B15:
Copying A11:BACKUP  .DOC =====) B15:
Copying A14:BACKUP  .DOC =====) B15:
Copying A14:BIGBURST.DOC =====) B15:
Copying A14:FLOPCOPY.DOC =====) B15:
Copying A13:MODEM7  .DOC =====) B15:
Copying A14:MULTCOPY.DOC =====) B15:
Copying A12:SWEEP38 .DOC =====) B15:

   1. A12:15-DISK .DOC    6k :#A

Tagging A12:15-DISK .DOC  Total of tagged files =     6k (    6k)
Tagging A11:BACKUP  .DOC  Total of tagged files =    14k (   13k)
Tagging A14:BACKUP  .DOC  Total of tagged files =    22k (   20k)
Tagging A14:BIGBURST.DOC  Total of tagged files =    26k (   23k)
Tagging A14:FLOPCOPY.DOC  Total of tagged files =    28k (   25k)
Tagging A13:MODEM7  .DOC  Total of tagged files =    66k (   63k)
Tagging A14:MULTCOPY.DOC  Total of tagged files =    68k (   64k)
Tagging A12:SWEEP38 .DOC  Total of tagged files =    82k (   78k)

   1. A12:15-DISK .DOC    6k :*E

Erase tagged or untagged files? (T/U) : T

Do you wish to be prompted? (Y/N) : N

Erasing A12:15-DISK .DOC Deleted.
Erasing A11:BACKUP  .DOC Deleted.
Erasing A14:BACKUP  .DOC Deleted.
Erasing A14:BIGBURST.DOC Deleted.
Erasing A14:FLOPCOPY.DOC Deleted.
Erasing A13:MODEM7  .DOC Deleted.
Erasing A14:MULTCOPY.DOC Deleted.
Erasing A12:SWEEP38 .DOC Deleted.
```

Listing 1

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Up and Running

by David Gerrold

Free software! Those are two of my favorite words. I like them even better when they're in the same sentence.

It seems sometimes, however, that free software is the holy grail of computing. There are all these wonderful stories about this users' group or that bulletin board or the fabled CP/M library at Alexandria; but a great deal of this fabled public domain software still remains out of the hands of the common user.

Now, here come two books, published almost simultaneously, that show you how to get your hands on some of the best *and most useful* software ever to come down the pike.

The first book is the Peopletalk Series *Free Software Handbook*, 1984-85 CP/M edition; written by T. Gregory Platt, Patricia Law Hatcher, and Blake H. Van Meter; and published by Peopletalk Associates Inc..

The second book is Alfred Glossbrenner's *How To Get Free Software: The Master Guide to Free Programs For Every Brand of Personal or Home Computer*.

Surprisingly, the two books do not duplicate each other as much as you would think. Indeed, they are two separate—and both *valid*—approaches to the problem.

The Free Software Handbook

Essentially, this is the manual and documentation for a collection of 70 extraordinary programs. These are all programs that are in the public domain—not copyrighted—and available from a variety of sources. What Peopletalk Associates have done is gather together a selection of the very best that they could find and made them available as a set. And what a set!

There are games, directory and file management programs, miscellaneous utilities, a hefty handful of applications that you always wish you had on hand but have never gotten around to purchasing or writing, a terrific library utility for squeezing an extra 35% out of a disk, a great modem program, and finally—a hacker's toolbox that is a must-have for anyone who is serious about his work.

Let me give you some idea of what you'll find here:

First up is *Adventure*—the Mike Goetz, 550-point version. This program alone is worth the entire price of the package. Adventure is the classic computer game. It can only be played on a computer, it cannot be played except on a computer—and this is the best version of the game ever written. Boot this one up and you will not see the light of day for months. Even if you don't want to play Adventure, it's still a good idea to have this game on hand. It can be a terrific babysitter.

Other games include Bio-Rythyms, Black Jack, Boggle, Chess (how good a version, I don't know), Lunar Lander, yet another version of Star Trek, and Wumpus. (Wumpus is the kindergarten version of Adventure.) It's a pretty *basic* collection of games (pun intended) and there's been a lot of progress since most of these were first put into the public domain—Wumpus, for example, must be over ten years old—but even so, the whole set together is a very good introduction to what's possible in computer games, and if nothing else, is a great way to help other people in your household to overcome their fear of the the machine.

Never mind—except for Adventure, the games should not be your primary reason for buying this package.

More important, there are a set

ILLUSTRATION BY JOYCE KITCHELL

of file management programs here that no CP/M user should be without— particularly a sweet little piece of work called NewSweep.

NewSweep is a "housecleaning" program. It includes many features of PIP, STAT, REName, ERAse, and TYPE; further it squeezes and unsqueezes files, reducing their size by up tp 40%. *And*, it allows you to go through an entire directory and tag files for copying or renaming, deleting, squeezing or unsqueezing. The documentation on this program takes ten pages and it has twenty-one (very powerful) commands. The authors of the book say it is the single most valuable program in the entire collection. I read the documentation—I'm convinced.

Other file management programs include a revised PIP which allows you to reset a disk drive without having to hit CTRL-C, UNERA which lets you rescue deleted files from a disk, Squeeze/Unsqueeze, and Mass Renaming. (There are others here too. These are just the ones that struck me as the most useful.)

Miscellaneous utilities include a Super Submit function which allows you to enter commands from a file or from the keyboard, several different file-display functions, two file compare programs, a typing tutor, and three different programs for printing banners.

Miscellaneous applications include a Calendar Generator, a Label Printer, a Program Locker, a File Scrambler, a Super Keyboarder (kinda like SmartKey), a Real Estate Advisor, a Spelling Checker, a program to let you use your printer as a typewriter, and a Print Unspooler. A lot of these programs fall into that category of programs I'd like to have but don't want to pay for and am too lazy to write myself. The file scrambler could be particularly useful if you have data you want to keep secure.

The Peopletalk collection also includes a whole set of library utilities, so you can store large numbers of related files under one name, a very useful modem program, and the above-mentioned hacker's toolbox.

The hacker's toolbox contains only four programs: a file dumper, a disk utility, an I/O capturer, and ZCPR2— which allows you to turbo-charge your version of CP/M. (This is one program that probably deserves a whole article unto itself. Watch this space.) ZCPR lets you enter multiple commands to your system on a single A prompt; you separate them with a semi-colon. It gives you additional user areas on your disk (for archive purposes only, you can't actually log onto them). It lets you create named directories and have automatic start-up procedures for specific user areas, plus you can assign log-on passwords. The program also has *meaningful* error messages and allows you to define your own menus. And more! Even the authors of the book concede that they have not yet explored all of ZCPR's capabilities.

The disk utility program included here is also very useful. It lets you directly examine and rewrite data on the disk. (This is not for inexperienced users.) Did you know, for instance, that WordStar has a message in it for people who start examining the code? It says, "Nosy, aren't you?"

Using DU-V86, I was able to rewrite the 9 bytes on the hard disk that used to say "Warm boot." Now they say, "Hi David!" and now every time my system resets itself, it also gives me a friendly greeting. Before I got the Kaypro, I had trained my old North Star to auto-start with a cheerful "Hi, Boss! Today is (the date), and it's now (the time)." I hadn't realized how much I'd missed that greeting until I gave the Kaypro this first personality transplant. (My next step is a clock-calendar board, then an appointment calendar. Can anyone recommend a good one?)

In any case, this is the very best collection of utility software I've ever seen for the Kaypro. The Kaypro is advertised as "The Compleat Computer"— but this is the bundle of software that really makes that true. Peopletalk Associates sells the book for $17.95 and the programs for $49.95. You'll need both the book and the disks. Write to Peopletalk Associates Inc., Box 863652, Plano, Texas 75086. You'll need to specify your disk format, of course.

Did you know WordStar has a message for people who start examining the code?

How To Get Free Software

This is a *thick* book. It's a 436-page trade paperback, and it sells for $14.95. It's cheap at that price. You can find it at almost any B. Dalton, Walden or Crown book store. The publisher, St. Martin's Press, has obviously invested a major effort in printing and distributing this book—and they'll

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probably make a lot of money with it. It's the right book for the right time.

Essentially, this book is a list of most of the best sources for public domain software. The list alone would be worth the price of the book, but the author has taken the time to annotate— at length—what's available, what it does, how it works, and how to get a copy. And if that weren't enough, he has interspersed throughout the book, like raisins in a pudding, scores of "Free Tips"—brief little tidbits of very useful information, displayed in boxes to set them apart from the rest of the text in the book. The Free Tips demonstrate that Glossbrenner knows his material *in depth*. This is no quick once-over-lightly treatment. This is *the book*.

A quick run through the table of contents:

Background and Basics of Free Software, The Vast Public Domain of CP/M (this is the section for Kaypro users!), Users' Groups, VisiCalc, dBase II and other Software Specific Collections, Machine-Specific Groups and Sources from A(Apple) to Z(Zenith), Non-User Group Distributors of Free Software, Free Software Over the Phone (including a very important discussion of modems and modem programs), CompuServe, The Source, Bulletin Board and Remote CP/M Software, IBM and Compatibles ("Shareware"), and finally The Treasure Trove of Unusual and Little-Known Sources of Free Software. There are also three appendices. A: XMODEM and MODEM7, B: How to Quadruple your Free Software Library, and C: Free CP/M Software Distribution Points and Club Contacts.

Kaypro users will find this an exceptionally valuable book precisely because of the vast software resources available to a CP/M user. I think you could turn a dozen different hackers loose with this book for a couple of years and still not explore all the possibilities it lists.

I think this book is going to turn a lot of beginners into competent journeymen.

The author, Alfred Glossbrenner is very specific throughout the text. He gives detailed descriptions and instructions, and this is exactly the kind of help a beginner would find most useful. (For those who don't recognize the word, a *beginner* is an "entry-level user".)

Indeed, I think this book is going to turn a lot of beginners into competent journeymen. I wish I'd had access to some of these sources six years ago. (Sigh.)

Afterthoughts

Even though the software is free, the distribution isn't. You will pay an average of $12-$15 per disk. This is standard. *(You can also obtain much of this software on the dial-in bulletin board systems.—TE.)* You should not pay more than that for public domain software.

When a piece of software is in public domain, that means it is not copyrighted. The person who wrote it is giving it away to whoever wants a copy. You, as a user, are free to give copies to whomever you choose (the issue of piracy or bootlegging is not germane here)—but you may *not* resell copies of a public domain program for profit. You may not resell it as your own, nor can you include it as part of a copyrighted package.

There have been cases where unscrupulous distributors have repackaged public domain software for resale without informing the customer that the software is available elsewhere for merely the cost of the disk and the copying. The scrupulous distributors identify public domain software as such when they sell you a copy. It's important to choose your dealers carefully. A dealer who would steal a program sure isn't going to think much of his customers' rights either.

These books are good guides to the best software and the Glossbrenner book is a good guide to the best dealers. I highly recommend both books. □

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Kaypro Wins Big in Reno

Victory at the International Business Decision Games.

by Laird Mooney

Many hail microcomputers as a panacea for the repetitive operations of running a business, e.g., filing, word processing, telecommunications, and accounting. Yet few use micros very intensely in the *process* of business decision making. Facing tough competition and time pressure at the Reno Business Policy Games, we of San Diego State University's (SDSU's) "Reno Team" saw no choice but to enlist a Kaypro 2 to aid in that process.

Games described

1984 marked the 20th Annual International Collegiate Business Policy Games at the University of Nevada-Reno. By simulating a competitive market typical of U.S. industry, the games aim to teach university students about corporate level decision-making under pressure.

The games were driven by regular deliveries of printouts from the University of Nevada's mainframe. The printouts reflect the simulation of events and quantitative measures per quarter within a single business industry. Using the printouts as the sole source of information for their "world," each team represents the top management of a one million dollar company producing various products for four geographical areas of the United States.

Overall, twenty-eight teams from twenty universities made up the Games' five worlds. Each world was considered an independent industry competing with a $10 durable product, like toasters.

Among the quantitative criteria for winning were: market share, net and cumulative net income, stock price (increase in shareholders value), return on investment, and dividend payout ratio. The following qualitative areas were also rated: strategy formulation and execution, organization and presentation of policies during annual reports, and stability of management in production decisions and cash budgeting. Three judges evaluated the above for each "world" of six teams.

The SDSU team

SDSU's six-member team consisted of the Captain or C.E.O. (Malcolm Mitchell) who was responsible for overall integration, Vice-Presidents in the functional areas of Marketing (Pamela Rinehart), Production (Paul Englert), Finance (John Tanner), and two specialty V.P.'s for Strategic Intelligence (John Lusignan), and Forecasting (me).

Flow of events

The need for the computer became clear as certain complications surfaced while we prepared for the initial weekly decisions in January, 1984. For example, the organizers complicated the games by spreading "industries" across four geographical areas, each with different characteristics. Since separate decisions had to be made on each area, information flows had to be likewise split four ways.

During the first phase, each team remained at their home campus and each decision had to be made in one week. Each real week represented an operating period of one quarter of the fiscal year. The overall corporate game time spanned a period of seven years and twenty decision periods.

The weekly home-campus decisions began when mainframe printouts arrived via special delivery each Sunday evening. They contained information on price, advertising, economy, sales, sales force, and profitability (balance sheet and profit & loss statements). Our decisions from that data had to be phoned to Reno by the next Friday morning.

The final round of competition in Reno packed ten decision quarters into two and a half days. This cut decision time down to forty-five, and later, thirty

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minutes per quarter. Because the number of calculations I *wanted* to make was enormous, the critical element was time. My Kaypro was looking better and better as I prepared.

When we arrived in Reno, I was surprised (and a little excited) to see that no other team in our world was using a micro. Several teams in other "worlds" had them, but used them primarily for word processing their annual reports (we did our reports on a typewriter to keep the Kaypro free for developing *data).*

Reno Team (L to R): Laird Mooney, John Lusignan, Pamela Rinehart, Paul Englert, Malcom Mitchell, Dr. Steven Jenner (faculty advisor), and John Tanner.

Strategy & tools

Our game strategy was elementary: Capture a large share of the market early, and then increase profitability through lowering costs. Our first task, then, was to find the most effective marketing techniques.

Each year the game master changes the market place "elasticities"—the sensitivities of market variables (e.g. sales) to changes in our decision variables (e.g. price, advertising allotment). Each team received identical data for the previous eight quarters for each market variable. I ran that data through a regression model. The model reflected how changes in price, advertising, number of sales people per area, salesperson salaries, and the overall economy (GNP growth rate) affected our sales. More precisely (and without delving into the intricacies of regression—a multivariate statistics technique), our model told me *how much* of a change in any of these, especially price and advertising, would effect sales. After price and advertising, the health of the general economy had the next largest impact on sales. Although we could not affect this, forewarnings of its direction gave us an edge (e.g., the eight-quarter pre-game data warned us of an impending recession).

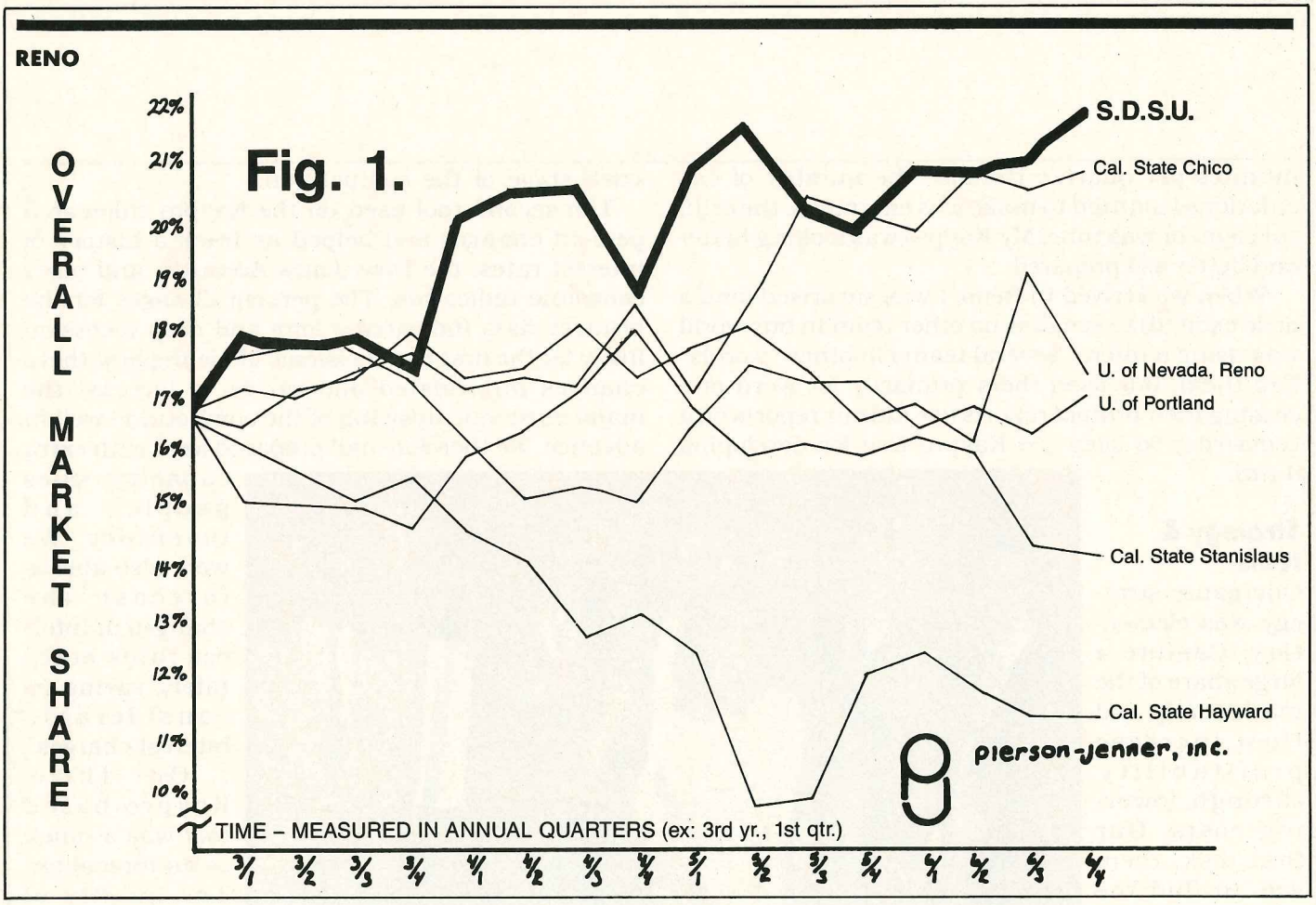
This Kaypro-based regression model was complicated, so we only ran it when we saw suspicious changes in the market variables. It did enable early detection of market changes and allowed us to formulate the most effective marketing campaign at each stage of the competition.

The second tool used on the Kaypro calculated percent changes and helped us track a history of interest rates, the Dow Jones Averages, and other economic indicators. The percent changes for the primary data indicated a long and deep recession likely for the first few decisions. Modeling how these changes interrelated allowed us to forecast the major economic upswing of the competition well in advance. We therefore had prepared for it with extra capacity, sales people, and inventory. We were also able to forecast the changes in interest rates accurately, saving us considerable interest charges.

Our third Kaypro-based tool was a quick sales forecaster. The quality of our decisions lived or died by the sales forecast, so it was necessary to design a spreadsheet to quickly forecast the sales in each area and for the overall industry (my main job). By using the general forecast from the regression model, plus my feel for what was occurring in the industry, I ran plots of the expected growth for the industry in the particular area against our expected market share. This system allowed us to "what-if" our marketing decision variables and get predicted results *before* committing ourselves to each game decision.

It took only three to five minutes to produce a forecast for the next quarter, and only ten to fifteen minutes to work up the five-quarter forecast. The resulting average accuracy of all sales forecasts was within three percent. This uncanny precision allowed us to keep production decisions realistic, and budget our cash position always within a few percentage points of the target set. The result: We were the only competitors in our world that did not "cash out" (i.e., go bankrupt).

The last tool consisted of a spreadsheet formulation which proved to be most useful during the final phase of competition. Originally devised by our CEO, this software related all the decisions from


RENO
OVERALL MARKET SHARE
22%
21%
20%
19%
18%
17%
16%
15%
14%
13%
12%
11%
10%
Fig. 1.
S.D.S.U.
Cal. State Chico
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U. of Portland
Cal. State Stanislaus
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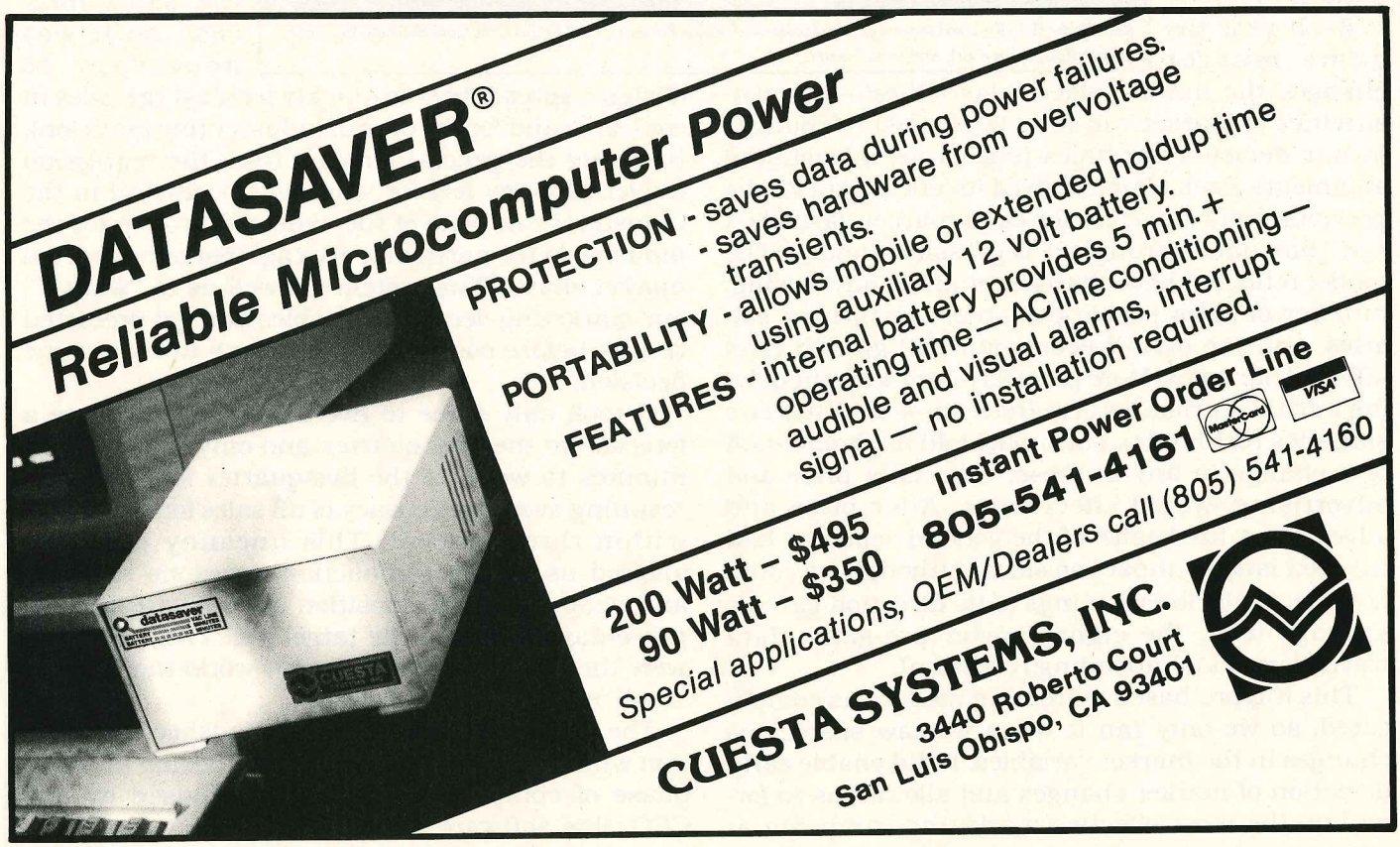
pierson-jenner, inc.
TIME – MEASURED IN ANNUAL QUARTERS (ex: 3rd yr., 1st qtr.)
3/1 3/2 3/3 3/4 4/1 4/2 4/3 4/4 5/1 5/2 5/3 5/4 6/1 6/2 6/3 6/4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Production, Marketing and Finance to the "bottom line"— profitability. The costs of adding, shutting down, or closing production lines along with overtime decisions flowed to the sales projections, advertising, and cost of sales entries. And finally, the costs of all prior decisions were combined with cash budgeting and financing decisions to produce our target net income figure for the quarter. This figure was within a remarkable *one* percent of actual on the majority of decisions. We didn't realize until after the competition that we had really created a spreadsheet simulation of the mainframe simulator itself!

A volcano erupts

Each year the game master provides something unusual to test the resolve of the teams. This year we received a news bulletin on the morning of our second day in Reno that Mount St. Helens had erupted again. Unfortunately, the jet stream was directly above her and the ash carried across the land, settling on everyones machinery. Half our production capacity was lost for a quarter. Since we were able to quickly determine all the ramifications of this disaster, we were able to hold our position; other teams suffered drastic consequences. Some teams never recovered. The point is the Kaypro enabled us to determine what the consequences were for various alternatives—without guessing.

And the winner is . . .

Our strategy worked. As shown in the "Overall Market Share Plot" (Figure 1) our market share jumped up early and we maintained it throughout the game while increasing our profitability tremendously through cost control. Moreover, our "Net Income" (Figure 2) substantially outpaced that of the competition.

However, our approach—and success—did not sit well with our competitors. Indeed, they claimed that using the Kaypro during the game was unfair (we won), because it was making decisions for us. Of course, the judges did not agree and our victory stands. In fact, one judge, Mr. Richard Chapin, Chief Financial Officer of First Interstate Bank of Nevada, said "San Diego State was the most professional and best managed team." And mentioned to a competitor, "[They] knew what you were going to do

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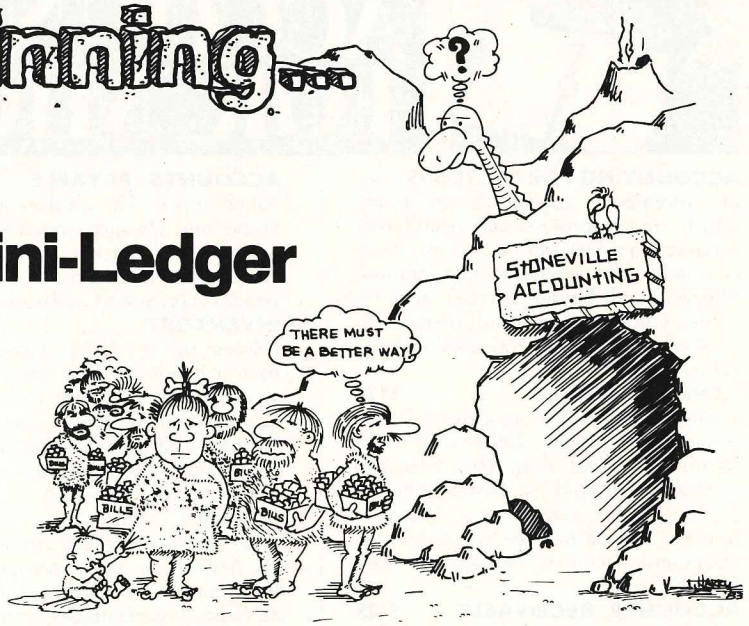

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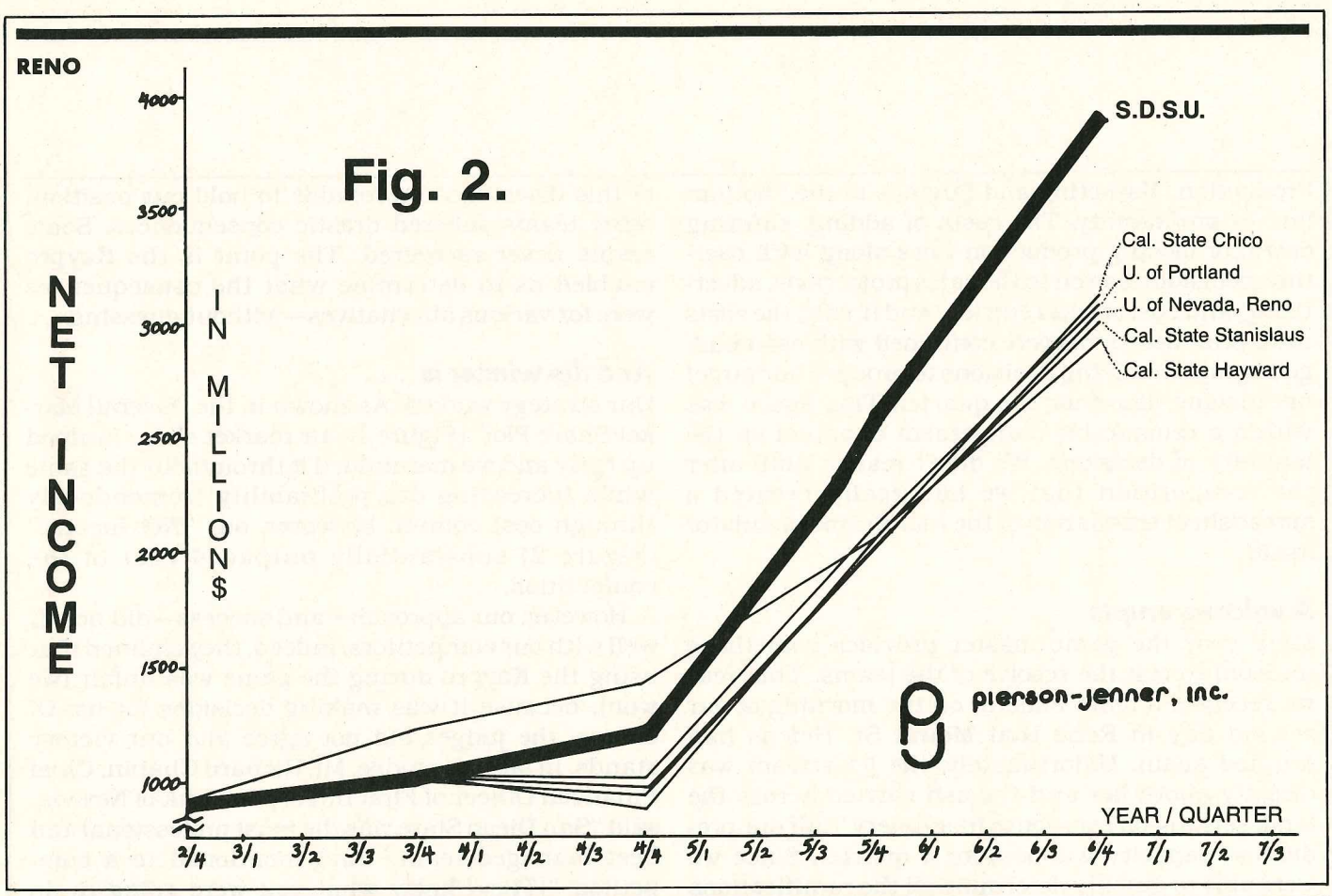

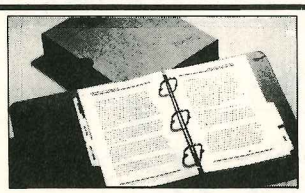

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before you did." The two other judges in our world—Mr. Gordon McMahon, President of Tahoe Leisure Homes, and Joe L. Gremban, Chairman and President of Sierra Pacific Power Company—stated "Take this management team, come up with a venture idea, and we'll invest."

Looking back

Clearly, the Kaypro allowed us to investigate the effects of our decisions much more extensively, and more quickly, than the computer-less teams could ever hope to. Indeed, each decision was speeded up so much that many times we would make a good decision in under twenty minutes, and still have time to improve it before the thirty minute deadline.

Each need filled by the micro involved either calculations too cumbersome to even consider doing by hand, or too time consuming to accomplish on a broad basis for each decision. Though computer tools were available to our competitors on their mainframes during the home-campus decisions, our Kaypro let us take our tools into the boardroom during the grand finale. Also, the exercise of devising tools was in itself beneficial because it forced us to 1) define the problem or need, and 2) breakdown exactly the steps necessary to bring the required decision information to light. This process gave each of our managers an extensive knowledge of their areas and the most important data flows.

To close, I'd like to respond to our competitors' argument that the Kaypro was doing too much deciding for us. We found that the essence of a quality business decision rests not in the numbers generated by the computer, but in the ability of those numbers to give management a clear, broad, and timely picture from which to make good decisions. Such a picture allowed our managers to model their future, test their ideas, and prepare for what our competitors could not see. Our competitors were right. The computer was unfair, not because it made decisions, but because it allowed us to know more about what was happening than they did. □

Laird Agnus Mooney is a senior in San Diego State University's Finance program, and a microcomputer consultant to small businesses. Laird will be the Captain of this year's "Reno Team."

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There's Gold in Those Programs

Breaking into the freelance market.

by George Sheldon

As microcomputer use grows, so grows the demand for good software. Many software publishers now realize that their regular staff cannot keep up with demand, and are now turning to freelance programmers for new material.

The opportunity to earn money selling your programs has never been better. But to be successful, I suggest the following:

—Be unique and original. Don't re-write another WordStar or dBASE II. You'll be better off creating something new. Just find your own special niche in the market. This is a business where it pays to specialize.

—Keep it simple and user-friendly! The easier a program is to use, the wider its market appeal—to users and publishers alike. Easy-to-use menus help. Do not add unnecessary features which may only confuse the user.

—Consistency counts. Ease user confusion by keeping your terminology, screens, titles, and error messages uniform throughout.

—Design your program "around" the person who uses it. An income tax program that an accountant finds simple will be incomprehensible to the average user.

—Make your program easily adaptable to the most popular microcomputers. Again, the wider your market appeal is, the easier it will be to locate a software publisher.

What's hot right now

Marilyn Miller, Director of Product Development of T.C.S. Systems, Inc., Houston, Texas, was asked what types of programs her firm is currently seeking. "We are looking for high level accounting packages, those that will interface with our current programs," Miller explained, "we also want programs that are designed for specific users, such as lawyers or the construction trades." She added that the programs she rejects for publication are "by and large, just too simplistic" or are "duplicates of what has already been done." Her best advice to would-be programmers is "spend extra time refining and working on your programs. Get them bug' free."

Miller said that a freelance programmer can "make a decent full-time living" and that work is always available for those who are good at their craft. When asked about competition between programmers, Miller quickly answered:

"If you are good, it's not tough at all. If they have a good idea, and real concrete thoughts about their program, we will work with them. We are working with a couple of people now who are at the planning stage of their projects, and we work with them on their design, so that when the end product is there, we know the it will be good. Complete documentation will also help sell your programs to a publisher."

Miller added that payment for a program is negotiated individually, usually on a royalty basis. This means that you would be paid a percentage of either the wholesale or retail price of each program sold. Royalty payments could range from 2% to 70%. Higher percentages, however, do not necessarily guarantee more income for the programmer. For example, a 25% royalty on the sale of 10,000 programs, is better than 70% of 75 programs. How well your publisher will push your product should be a major factor in choosing a software publisher.

How much can you make

Payment is often influenced by how complete your submission is. The more rewriting the program and documentation need, the lower the payment. Therefore, taking extra time to prepare a clean and complete package, can pay well.

Brad M. McGehee, of Springfield, Missouri, has

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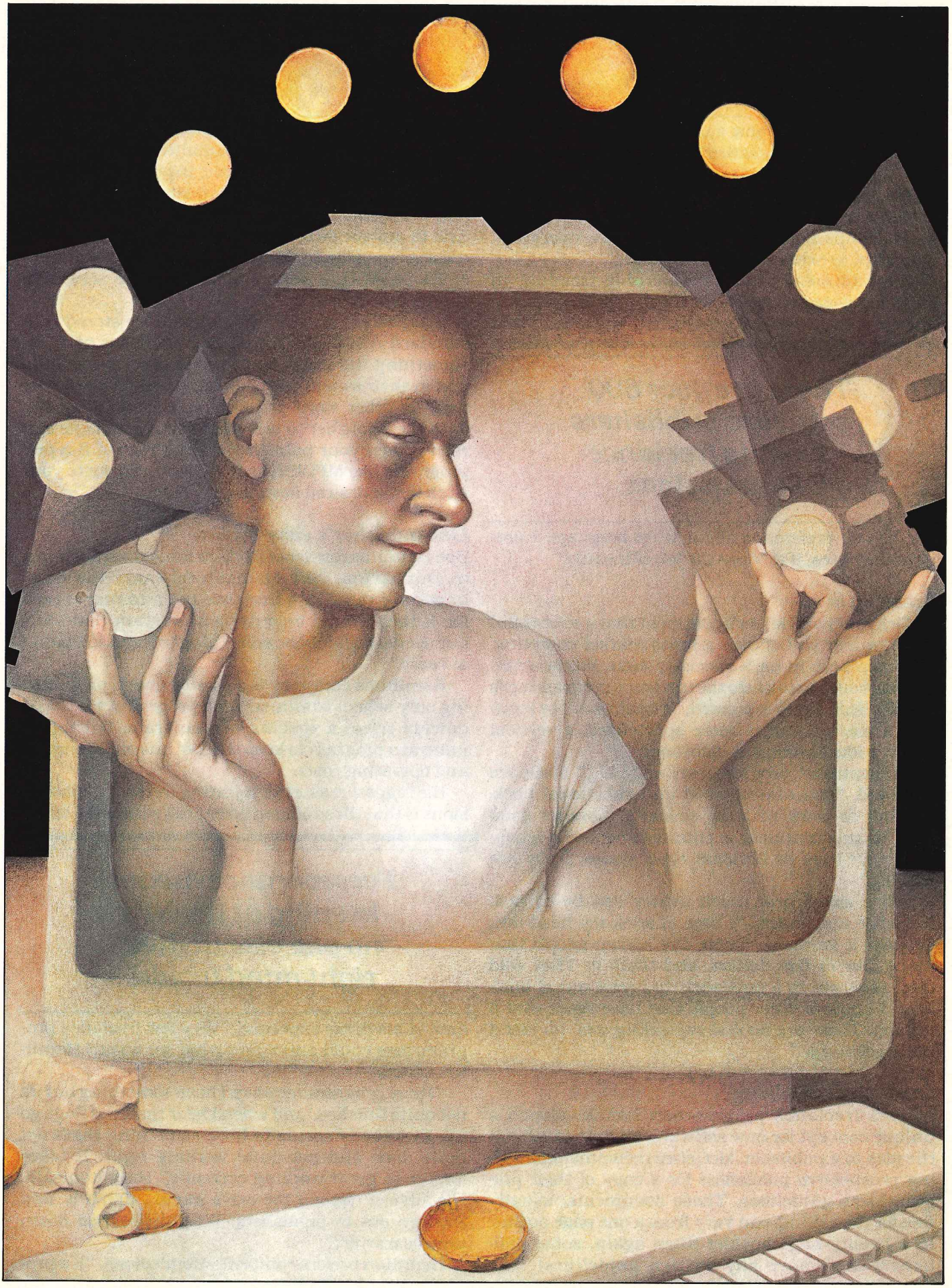

ILLUSTRATION BY SUSAN GALLAGHER

been writing about how and where to sell freelance software for the past several years. In a recent interview, McGehee remarked that there are over 600 software publishers seeking freelance submissions.

"Most of the bigger markets for freelancers are small companies, the one or two people operation, who want to expand," McGehee said.

Programmers have considerable freedom in choosing a language. "The criterion for language is always speed," McGehee reported. Miller said that she has no preference about what language a programmer uses, if it "does the job efficiently."

There are over 600 software publishers seeking freelance submissions.

Breaking in

McGehee echoed Miller's comment that a successful programmer will choose a mass market computer, and then zero in on a specialty area. When asked how he would break into the freelance programmer's market, McGehee responded, "I would want to zoom into a market that is more specialized, a vertical market, like banking or insurance.

"Educational programs are very big," McGehee observed, "you almost need an educational background, or work with an educator. Another good area for programmers is entertainment, especially adventure-type or fictional type games. They are real big."

When asked how much money can be earned, McGehee responded: "I hate to stick my head out, because it varies so much. I've known people that made four or five dollars, and that's it. They sold their program to a publisher that went out of business. I know of other people that have made over a million. There are no real typical figures. It's just a big, huge range."

Successful submitting

After a freelance programmer has developed a unique concept for new software, it's time to submit the idea to a publisher. McGehee recommended asking prospective publishers for a copy of their programmer's guidelines. These documents, usually free for the asking, can vary from a one page outline to a twenty-page booklet (then again, some publishers don't have any written guidelines). The guidelines usually specify just how the publisher wants the finished package submitted.

If no guidelines are available, the program should be submitted with your documentation, and a System Proposal. Send your package first class mail. And to protect your disks from damage, use special diskette mailers. Include a self-addressed, stamped envelope so that your material can be returned, should it be rejected.

Information on your disk should be stored in a standard ASCII file, unless the publisher asks for something different. Many word processors store text in their own unusual formats, which cannot be read by other word processors. You should check with the publisher to see what disk formats he can read. When your publisher doesn't have a Kaypro, programs like MFDISK or UNIFORM can write your work in the desired format.

One publisher's view

Bob Hamilton, owner of Applied Education Systems, in Dunbarton, New Hampshire, said "the most important thing for a freelance programmer to realize is they should be writing a program that suits our needs. It should be something we tend to market or carry."

Hamilton's company is a specialized firm, featuring only school administration programs. He would quickly reject a spelling bee program, but might jump at a program to keep track of bus maintenance and operating costs.

His biggest reason for rejecting freelance submissions is that those offered do not fall within the small area of his firm's expertise. "Very few freelance programmers could anticipate what we want," Hamilton added.

Perseverance means keeping at it when no one else in their right mind would.

"Many programmers say,'I have something but it's not quite finished,' and when I hear that, red flags go up. Everybody seems to have something that's not quite done and not quite working right. It takes forever to get it working correctly," Hamilton said. His advice: "Spend the extra month, finish it, and then go out to publishers. Why get turned down unnecessarily?"

Hamilton prefers complete submissions. "If a pro-

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grammer could say that they have a manual already written to go with their stuff, that would be good."

General advice

Hamilton offered general advice about the freelancing business: "All agreements, even from the freelancer's point of view, should be put in writing. If there is a legitimate business deal going on, and everyone is dealing in good faith, it's no insult for the freelancer to say, 'let's put it in writing.'

"The most important ingredient for any of these endeavors is perseverance," Hamilton observed. "Freelancers who persevere and are good at their craft, will succeed. Perseverance means to keep going when everything seems crazy. It doesn't mean you have to lay out lots of money. It just means you have to keep at it, when nobody else in their right mind would."

Indeed, Hamilton explained his success in the software industry by saying "We started five years ago, and our motto is 'it will never be finished.' We just keep doing it."

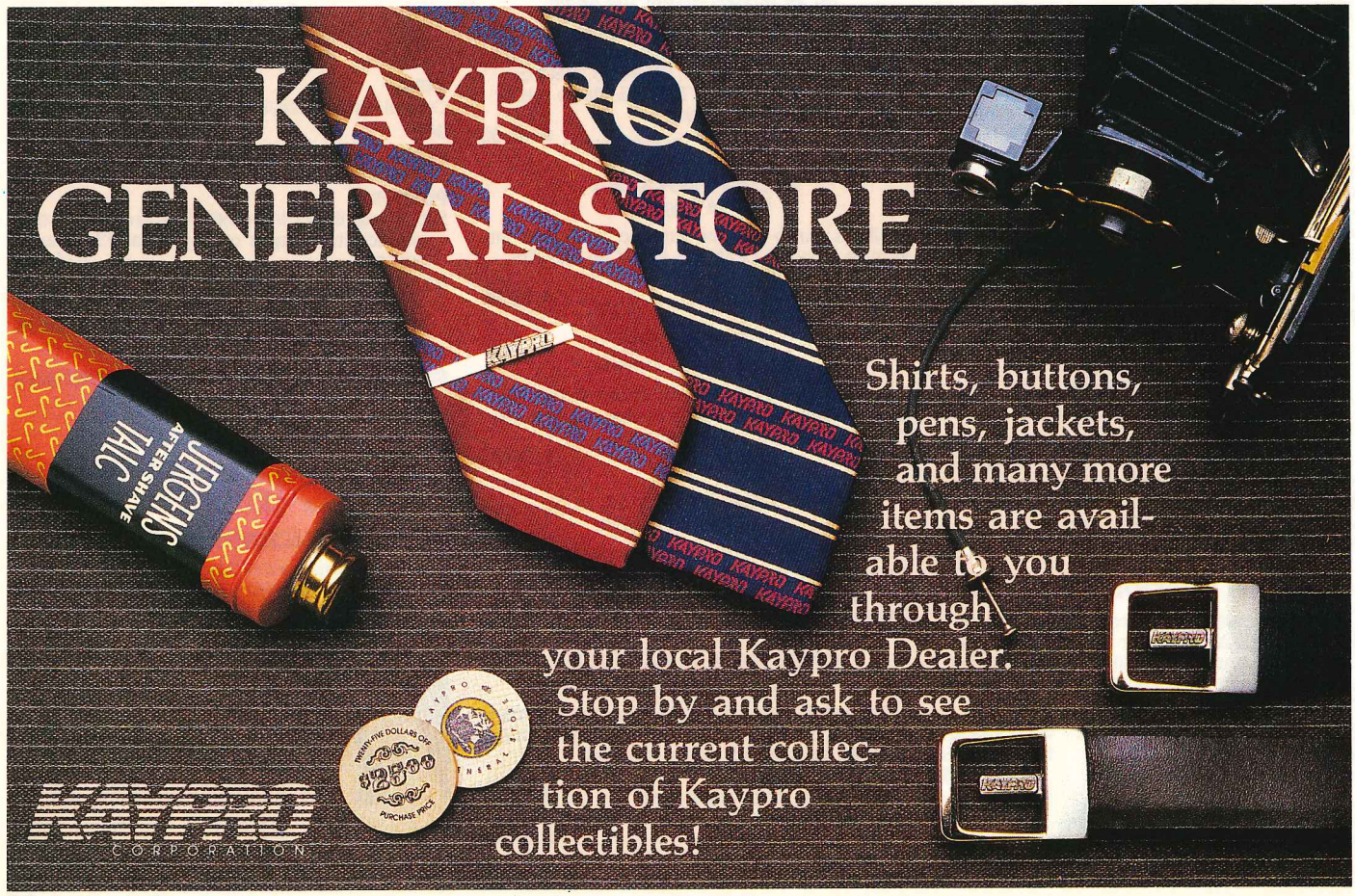
Industry experts agree that the software market has only been scratched. In the future, you will see much more software available, and it will appear for sale in more than just computer stores.

According to a recent issue of *Publisher's Weekly*, the magazine of the book industry, many book stores, including the large chains, now stock computer software. In general, book stores have problems selling high priced software, but packages selling for less than $50, are moving briskly. One low-cost software publisher I interviewed claimed he simply could not produce copies quick enough to meet the demand.

With the right idea, perhaps some luck, good timing, and the right approach to a publisher, you too can join the ranks of freelance programmers. It's certainly a good credit on a resume, and the income opportunities are substantial. You just need a good program.

Remember to specialize that program, and persevere. □

George Sheldon is a freelance writer who until now has focused on country music, insurance and law enforcement.



The Formal Proposal

by George Sheldon

Grabbing a publisher's eye is not easy—nor impossible. Your most important sales tool is the formal proposal.

After you have written the publisher a query letter, and received a positive response (yes, we would be interested in knowing more about your program) it is time to prepare an in-depth, formal proposal. The proposal should include:

1. PROGRAM IDENTIFICATION—list your full name, address, and phone number, as well as the working title of your program.

2. THE PROGRAM OVERVIEW—a summary of the program with a brief description of its unique or unusual features.

3. THE PROBABLE USER—who will be the final user of your program? School students, or real estate agents?

4. DESCRIPTION OF THE PROGRAM—describe your program in detail. Make sure the explanation is crystal clear, so that after reviewing this section the publisher will know exactly what your program is, what it will do, and how it works. Don't forget to describe all of its outstanding features.

5. TECHNICAL REQUIREMENTS—describe both the hardware and software requirements of your program. Include the makes, models, and formats of computers on which your program runs, and the program's size and memory requirements. Also include the number of disks needed, any other hardware or software required, and the language in which your program is written.

6. DOCUMENTATION—describe all documentation which accompany your program.

7. PROBABLE MARKET—describe the probable market for your software and list any known competition or similar programs. Detail why your program is superior to any other on the market.

8. CONCLUSION—emphasize why your program should be published (e.g. superior to any other similar program, the market potential is tremendous, etc.).

The proposal should be a document two to eight pages long, single-spaced and neatly typed on high quality, white, bond paper. The complexity of your program will determine the proposal's final length.

Your formal proposal should resemble one of those old history outlines you had to prepare in the tenth grade, using Roman numerals for your captions, etc.

Send your proposal along with a cover letter that gently reminds the publisher that you have received the okay from him or her to submit the proposal. Make certain that your cover letter states the program you have written is ready for submission.

Remember, the formal proposal is your "sales representative" in the prospective software publisher's office. Spend some extra time to refine it to a document of persuasive perfection. □

More on Freelance Programming

by George Sheldon

Finding more information about freelance programming may be as challenging as writing quality software.

I recommend two books on the subject: *1985 Programmers Market* lists software publishers who are actively seeking freelance submissions. Listings include the name of contacts within the publisher's organization, and types of programs sought, computer makes required, and examples of software currently published. The book also includes several chapters on how to market your software.

Writing Software User Manuals was written for writers to make money preparing user manuals, but it is a book that any serious freelance programmer will want to review in detail. I am impressed by how the book discusses the preparation of a fictional user manual, and by its tips on making the manual understandable.

Both books are available from Writer's Digest Books, 9933 Alliance Road, Cincinnati, Ohio, 45242. If they are not available at your local book store, you can order them directly by mail by calling (800) 543-4644. □

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Extra! Extra! Kaypros Invade Newspaper Business!

One publisher's story.

by June McMahon

By and large, small newspapers don't rush into new technology.

This probably is due to a fact of life on most such publications—limited finances. Few small newspapers can afford either the luxury of expensive new equipment or large enough staffs to allow the decision-maker time to study new techniques and equipment. So they end up putting out newspapers without that new technology, and doing a lot of unnecessary work in the process.

Micro-based publishing

My husband Mark and I are different from most small newspaper owners in that we did take advantage of new technology. We have owned and run small newspapers for 22 years, and have travelled an odyssey covering many different kinds of equipment. We have found that a Kaypro-based system can give us the same advantages larger newspapers enjoy, without straining our limited means. With standard word processing and spreadsheet packages, plus a few special programs for newspaper publishing developed by our son, we manage to produce a great volume of work in the most efficient manner.

We now run our weekly and semi-weekly papers (around 4,300 circulation each) with a Kaypro-based system. We decided to switch to small computers from a dedicated terminal system on the *Humboldt Sun* (Winnemucca, NV) and *Western News* (Libby, MT) because we found we could buy comparable or better equipment for much less money. We also found the microcomputers were more versatile, allowing the same machine to do double duty handling business needs when not in use by the editorial staff.

We use three Kaypro 2s and an IMS on the *Sun*, with a Compugraphic Unisetter connected to the editor's 2. On the *Western News*, we use four 2s and a 10, plus a Morrow interfaced to a Compugraphic Computape II and a 2961. Reporters work on their own 2s, passing disks to the editors, who also use Kaypros. The typist who handles incoming news releases and legal ads uses the Morrow with Perfect writer and Uniform.

It would be simpler to have the same computers for everyone. In our case, the Morrow was purchased before we learned about Kaypro. We have been able to use the Morrow for typesetting; others with mixed equipment may be able to use a similar system. The typist uses the Uniform program to convert the B drive of the Morrow to a Kaypro format, then she feeds material from the reporters' disks through a buffer to the phototypesetter.

For smaller publications, one Kaypro 10 (or even a Kaypro 2) with the proper software could do the job with an outlay of less than $3500. The word processing and bookkeeping software is included in the price of the Kaypro, of course. Even purchase of special programs for circulation, and classified and display advertising should still keep you under the $3500 ceiling.

Conversions from other equipment may be financially quite advantageous. For example, when we sold the seven year old Compugraphic dedicated terminals we had used for the *Western News*, we ended up with enough money to buy four Kaypro 2's.

The low cost of the Kaypro allows us to have more than one machine. Redundancy is absolutely vital for newspapers, since equipment breakdowns can mean no newspaper, especially in isolated rural areas where service is hard to come by.

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Nothing's perfect

There are problems with going the microcomputer route rather than the dedicated terminal set-up. These include having to think occasionally about what you are doing instead of being led gently by menus of publishing-specific mainframe software. It also means someone (probably the person who made the decision in the first place) is going to have to learn, *really learn*, to understand what's happening with the computer.

I won't claim it's all been easy. There are problems and frustrations galore when setting up a computerized newspaper publishing system. But the problems, I might add, occur whether you are doing your own thing or buying a dedicated system. The difference is in the amount of hand-holding you get with a higher priced system. Most expensive systems come with a training program; with a Kaypro-based system you'll have to solve many of your own problems or know who to call when things go wrong. With your own micro-based system, you really do have to read and understand the manuals. (A class in programming at the local community school or high school may pay valuable dividends, even if you never do your own programming.)

The good part

The versatility, however, of the small computer system makes it all worthwhile. When the reporter is through with the Kaypro, the bookkeeper can take over, or it can be used for classifieds or mailing. You are freed from the limitations of a dedicated system.

Redundancy is vital for newspapers, since equipment breakdowns can mean no paper.

The portability of Kaypros offers another advantage over a dedicated terminal system. Our reporters and editors often take the machines home at the end of the day or on weekends when they have stories to finish. Reporters in the field can take along a machine and work at night in a hotel room (or anyplace with an electrical outlet). If reporters are far afield, they can send in articles by modem or mail, saving the cost and time of re-keyboarding the copy.

Word processing programs with their spelling checkers are a wonderful plus for newswriters. Both of our newspapers are using Perfect Writer and Speller in the newsroom, with the keypads reconfigured to simplify word processing commands. Perfect Writer's dual screen capability is very useful in editing. It is also very handy at changing column width. A story can be reset in wide measure or narrow measure in the blink of an eye allowing much more leeway for creative page make-up.

We don't find the spelling program particularly useful for news stories containing many proper names. Specific local references (such as the names of schools, councilmen, commissioners, etc.) can be added to the spelling checker dictionary. But sports stories, in particular, usually contain so many names it just isn't practical under deadline pressure. I use my speller when I have plenty of time and have carefully proofread the copy myself, just to be sure I haven't missed something.

Specialized programs

We use special programs developed by our son, Steve McMahon, for SunType Publishing Systems. We use his programs for classifieds, circulation, and display billing. Since the programs worked out well on our papers, Steve now markets them through his company, SunType Publishing Systems of Berkeley, California.

The classified program was originally developed specifically for our use. It is designed for newspapers which need to keep track of no more than 2000 want-ads and which never run more than 1500 ads in a single edition. With it, the ad taker enters the ads as they come in. At press time, the program sorts ads into the proper categories, selects the ads due to run in that issue and sends them to the phototypesetter. TFN (run until further notice) ads are given special handling and at month's end, the bills are totaled and printed out on cards for mailing. A program like this more than pays for itself.

We use the Kaypro 10 with the classified system because of its greater memory and speed. Recently the 10 developed a problem and had to be sent off for repairs. But because we could run a back-up of the classified program on our Kaypro 2, we avoided going back to the tedious system of handling ads manually.

Our SunType circulation program keeps track of subscribers, bills customers whose subscriptions have expired, and prints mailing labels.

Another handy tool is the SunType keypad customization program. It's set up to use a single keystroke: to delete character, delete word, delete-to-end-of-line and delete a line, go to the top or bottom of the page, page forward or backwards, save and quit the program, or to the top or bottom of the copy

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- **Invoicing Option** - speeds up invoicing, inventory, and Accounts Receivable! It enters sales, prints invoices, and collects information about your customer and the sale for tax and receivables purposes. It automatically updates inventory quantities and sales dates. **$100**
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and reform. Also included are the commands to invoke Perfect Speller and a special paragraph key which puts in the codes needed by the phototypesetter.

Last, but not least, is the SunType Queue program, which allows us to send a number of files to the printer at once. The editor can send finished

Printers are now coming on the market capable of producing typeset quality.

stories to the phototypesetter, leaving out stories which are still in progress.

While these types of programs are available in the more expensive systems intended for larger newspapers, most are only now becoming available for microcomputers.

The odyssey continues

We haven't ended our search for the perfect system. For one thing, printers are just now beginning to come on the market which are capable of producing typeset quality printouts. We are experimenting now with this type printer to bypass the phototypesetter and save thousands of dollars a year on expensive phototypesetting paper.

Early in our experiments with dedicated terminals, we had a reporter who all too frequently hit a key which promptly scrolled his copy off the screen and into oblivion before he had saved it. With an outraged howl, he would leap to his feet and grab the terminal with both hands in an effort to hold it back.

Unlike that reporter, we aren't holding back. We're moving forward into what we see as the future of the whole newspaper business: computerization. □

June McMahon and her husband, Mark, own and operate two small newspapers, the weekly Western News *in Montana and the semi-weekly* Humboldt Sun *in Nevada.*

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The Wall Street Hacker

An introduction to Kaypro-aided financial analysis.

by William W. Wade

Can your Kaypro help you keep track of your personal investments? Of course it can. Can it open the way to making millions on Wall Street? Not likely. Computers, large and small, have been available to the financial community for decades, but if any one has discovered a foolproof way of using them to tell if the market will go up or down tomorrow, it's a well kept secret. In any case, computer-aided number crunching, coupled with charts and graphs, remains a popular Wall Street activity. It can reveal how both individual stocks and the market as a whole have moved to where they are today. It also suggests hypothetical projections of what might happen if an investor's pet theories are correct. But certainty? That's another matter. We are still stuck with J.P. Morgan's answer when a turn-of-the-century reporter asked him what the market would do next. Said the archetypical tycoon: "It will fluctuate."

What can your Kaypro do to help you chart a course through the fluctuations? First, it offers a way to tell with greater ease and accuracy where you and your investments are today.

Every individual investor is unique. Therefore, your first step involves getting a picture of yourself—your earning power, savings, and how much you feel you can risk on assets that fluctuate, sometimes with dizzying speed. Your age, career status, tax bracket and a host of other things influence this search for financial identity. For example, "Yuppies"—young upwardly mobile professionals—may be able to risk more than the head of a family with several children to put through college. A couple approaching retirement whose offspring have become independent will have different inclinations. Individual temperaments will also influence investing. Each must determine how much financial uncertainty he or she can tolerate. Even a conservative stock portfolio in a recovering economy has enough sinking spells to give twinges to the faint hearted.

How the computer helps

The identity search is aided first by spreadsheet software, e.g., Perfect Calc or CalcStar. Such programs offer several advantages over pencil and paper methods. That is, they allow handy copy functions and they let you fill the spreadsheet cells with numeric values, or with formulas involving other cells. The formulas allow you to change one number anywhere on the spreadsheet. Then with a single command, all related numbers will change precisely according to the interdependent formulas.

A simple example

To illustrate, assume you had been tracking the modest portfolio in the spreadsheet of Table 1. That portfolio includes broker-recommended conservative stocks: a public utility (ConsEd), a railroad (CSX), a blue chip manufacturer (GE), and a telecommunications issue (GTE). The spreadsheet reveals a 9.62 percent loss before the August rally restored most of the loss. The formula for that percentage change would appear in the spreadsheet cell as:

(d7-f7)/d7)*#100

where the letters and numbers stand for the following rows and columns:

((col4row7-col6row7)/col4row7)*100)

which, in turn, draw these values from elsewhere in the spreadsheet:

((10,062-9,094)/10,062)*100) = -9.62%

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ILLUSTRATION BY RICK GEARY

to obtain the percentage change of -9.62.

Spreadsheet software would then allow you to copy the block used in the above, into the next time interval. You, in turn, would enter the new period's input values, and the copied formula would automatically provide the new percentage change.

In analyzing the 9.62 percent decline, the investor would note that it amounts to nearly a one thousand dollar decline in his portfolio value. The investor has to ask if he can endure such changes. (This investor could take some comfort, however, knowing his performance was mostly better than the indexes, also tracked on that spreadsheet).

The computerized investor can enter stocks he's dreaming of buying.

Perfect Calc, and CalcStar are the most popular spreadsheet programs run on Kaypros. Though Perfect Calc offers budget and net worth programs readily adaptable to individual needs, both help paint a picture of where you stand in terms of funds already invested or available.

Whichever spreadsheet software you use, you will soon want to set up several spreadsheets to make certain comparisons. For example, you can use different spreadsheets to enter different lists of stocks you are dreaming of buying. This allows you to compare "paper" portfolios with those already owned. Tracking these over time provides a basis for selling weak stocks to make room for more promising issues.

Two classic approaches

The spreadsheets and other software, including MBASIC, also facilitate the two classic types of Wall Street analysis— fundamental and technical. Fundamentalists study companies and the economy; technicians study the stock market itself. Both schools chew up numbers. Purists in each camp scorn the other's procedures. But pragmatic investors in the middle often use the fundamentalist approach for picking stocks and the tools of the technicians to take some guesswork out of deciding when to buy and sell.

Approaching fundamental analysis

Consider what a spreadsheet can do for tracking fundamentals. The fundamentalist is looking for companies doing well and likely to continue to profit in coming months or years. Fundamentalists pore over annual reports, search for cash-rich balance sheets and study Wall Street's all important bottom line—earnings per share. An investor who wants to watch his stocks closely can record company earnings quarterly on a spreadsheet to better see when a stock starts to become a loser. In searching for winners, fundamentalists comb company reports for firms that show annual increases of fifteen percent or more for five years—considered the mark of a real growth stock. (See Listing 2 at the end of this article for a simple MBASIC program which screens stocks for earnings and measures them against current market prices.)

After the recent recession, not too many companies can show uninterrupted five-year growth. And even if they can, that leaves the question of what an investor should pay per share for such a stock. For that, fundamentalists look at price/earnings ratios—what it costs to buy one dollar of annual earnings. A stock selling at $16 a share that earns $4 yearly has a P/E of 4, and, other things being equal, can be considered a real bargain. However, if the same stock only earns $1 dollar a year, its P/E is 16 and it has become expensive. Daily newspaper stock tables, which track P/Es regularly, show plenty of good investments in the 10 to 12 range.

	Quan.	Unit Pr 12/31/83	Mkt Val 12/31/83	Unit Pr 6/30/84	Mkt Val 6/30/84	% Chng	Unit Pr 8/31/84	Mkt Val 8/31/84	% Chng
Stocks									
ConsEd	100	24.87	2,487	25.25	2,525	1.53	26.87	2,687	6.42
CSX	100	24.75	2,475	20.75	2,075	-16.16	24.00	2,400	15.66
GE	50	58.62	2,931	52.50	2,625	-10.44	57.87	2,894	10.23
GTE	50	43.37	2,169	37.37	1,869	-13.83	42.00	2,100	12.39
			10,062		9,094	-9.62		10,081	10.85
Indexes									
Dw Jns Ind			1,259		1,132	-10.03		1,224	8.09
NYSE Comp			95		88	-7.14		96	8.62
S & P 500			165		153	-7.12		167	9.02
Val line			194		173	-11.12		183	5.94

Table 1

Purists in each camp scorn the other's procedures.

Fundamental analysts have all kinds of additional tests for stock picking. Some want stockholders' equity (found on a company's balance sheet) to equal at least fifty percent of the firm's total assets. Others measure long-term debt as a fraction of total assets. Some look for dividend growth as well as earnings growth. Some want to put their money

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into large companies with multi-million dollar capitalizations. Others take a more speculative approach; they check newer, smaller companies which combine higher risks with the potential of much higher rewards. The Wall Street hacker can devise a series of short programs to represent his or her own approach to such questions. In time, the end result may be a master program used regularly for buy and sell decisions.

The purist technician wants to look at wavy lines, comparing peaks and valleys.

Technical analysis

Technical analysis presents the hacker with perhaps the biggest challenge. Technical analysts believe the tape tells all. They say the basics studied by their fundamentalist rivals are already accounted for in any day's market trading, since buyers and sellers have the same access to earnings reports, the ups and downs of the general economy, and all the other causes of stock fluctuations. Technicians like to put the market action down on charts and graphs. They count how many stocks advance and how many decline each day, how many sell at new highs and how many at new lows. They pay close attention to trading volume. They think that heavy volume in a down market means a continued slump, while heavy upside volume presages a bigger rise; and dwindling volume in either direction points to reversals and uncertainty.

The computerized investor who wants to taste this arcane business can use spreadsheets as a starting point. Daily data from *The New York Times*, *The Wall Street Journal* and *Barron's* allow the investor to compile moving averages of advance/decline ratios and other statistics that go into buy and sell indicators.

Be warned, however, that the Wall Street hacker is not likely to find quick and easy answers. One of the best publicized technical indicators—devised by Robert J. Nurock and reported regularly on public television's Wall Street Week—consists of ten diverse and complicated ingredients. When Nurock and Host Lou Rukeyser banter about whether the "elves" are bullish, bearish or neutral, they are glossing over thousands of calculations. Nurock has published some of the secrets of his index in *The AAMI Journal* of the American Association of Microcomputer Investors, Inc. (P.O. Box 1384, Princeton, NJ 08542). It includes a spreadsheet formulation of a Dow Jones momentum ratio which flags sell and buy signals when 30-day moving averages hit certain points. But Nurock insists all ten elements are needed for a useful guide. Other technicians talk of tracking as many as sixty indicators daily.

More tools for the quest

The Wall Street hacker who plunges into technical analysis may find himself running up against software and hardware limitations. Thomas A. Meyers, editor of *The AAMI Journal*, reports the existence of more than 500 investor-oriented software programs for personal computers—a category that covers real estate and taxes, as well as financial instruments. He says only fifteen or so of these are tailored for the Kaypro—three for fundamental analysis and just one for technical analysis.

Computerized Investing, a bimonthly newsletter issued by the American Association of Individual Investors (612 N. Michigan Ave., Chicago, IL 60611) discusses both technical and fundamental analysis. In the newsletter, Editor Norm Nicholson has published a half dozen MBASIC programs about investing. He also offers an annual catalogue of resources, including programs in the public domain.

Graphics

Graphics aren't needed for all technical indicators but they are essential for some. The purist technician wants to look at wavy lines, comparing the Alpine peaks and valleys of one chart with rises and falls on another. He searches for divergence—divergences between what the blue chips of the Dow Jones 30 industrials are doing and what the market as a whole is doing. There fore, a computer owner without graphics capability (such as early Kaypro II owners)must do his graphing the old fashioned way —with pencil and graph paper.

Summary

Investors never like uncertainty—but that is what they face—always. The computer bestows no magic way of foretelling the future—only the challenge that the Wall Street hacker can hone both computer and investing skills while learning more about his own financial identity. □

William W. Wade is a professional writer and do-it-yourself investor. He holds a M.Sc. from the London School of Economics and Political Science, and has spent the past twenty-five years as a writer and editor for the Voice of America.

```
Sample run (your input is in boldface).

Company name     : General Electric
Number of years  : 5
First year       : 1975
Current price    : 55

Enter earnings/share for each year.

     1975 : 3.34
     1976 : 3.38
     1977 : 3.75
     1978 : 4.05
     1979 : 4.13

Output:

       Price / Earnings Ratio

         for: General Electric

Year          Earnings        Percentage Chg
-------------------------------------------

1975        $   3.34                0.00
1976        $   3.38                1.20
1977        $   3.75               10.95
1978        $   4.05                8.00
1979        $   4.13                1.98

Average yearly earnings: $   3.73

Based on a current price of 55.00  and last year's earnings
General Electric has a P/E ratio of  13.32
```

```
1000 '              -= Price Earnings Test =-
1010 '               (C) W. W. Wade, 8/20/84
1020 '
1030 HDR1$ = "          Price / Earnings Ratio"
1040 HDR2$ = "Year          Earnings        Percentage Chg"
1050 DASH$ = "-------------------------------------------"
1060 FORMAT$="####          $####.##                ##.##"
1070 EARN=0
1080 CLS$=CHR$(26) ' Clear Screen & Home Cursor
1090 '
1100 ' ************   Begin Main Program   *****************
1110 ' ************    Data Entry Area     *****************
1120 '
1130 PRINT CLS$ ' Clear Screen
1140 PRINT HDR1$
1150 PRINT
1160 INPUT "Company name    :",CONAME$
1170 INPUT "Number of years :",NUMYRS
1180 INPUT "First year      :",FYEAR
1190 INPUT "Current price   :",CPRICE
1200 DIM YEAR(NUMYRS),EARN(NUMYRS) ' Dimension working arrays
1210 PRINT
1220 PRINT "Enter earnings/share for each year."
1230 PRINT
1240 FOR I=1 TO NUMYRS
1250    YEAR(I)=FYEAR+(I-1)
1260    PRINT TAB(5) YEAR(I);" : ";
1270    INPUT "",EARN(I)
1280 NEXT I
1290 '
1300 ' ***********      Print Report     *******************
1310 '
1320 PRINT CLS$
1330 PRINT HDR1$
1340 PRINT
1350 PRINT "          for: "; CONAME$
1360 PRINT
1370 PRINT HDR2$
1380 PRINT DASH$
1390 PRINT
1400 FOR I=1 TO NUMYRS
1410    TOTEARN = TOTEARN + EARN(I)
1420    DIV = EARN(I) - EARN (I-1)
1430    IF EARN(I-1) <> 0 THEN CHG = DIV/EARN(I-1)*100
1440    PRINT USING FORMAT$;YEAR(I);EARN(I);CHG
1450 NEXT I
1460 PRINT
1470 PRINT USING "Average yearly earnings: $####.##";TOTEARN/NUMYRS
1480 PRINT
1490 PRINT USING "Based on a current price of ##.## ";CPRICE;
1500 PRINT " and last year's earnings"
1510 PRINT USING "& has a P/E ratio of ###.##";CONAME$;CPRICE/EARN(NUMYRS)
1520 '
1530 ' ****************   End of Program   *******************
1540 '
1550 END
```

Listing 2

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Word Processing for Profit

Start a home-based word processing business.

by Tod Westcott

I started a home word processing service in this small town, large university community— Lawrence, Kansas—a year and a half ago. It happened to be the first such service, which indicates how new the use of computers for home businesses still is. Since then, dozens of people have started similar services, some as little as a month after I took out my first ad in the University paper. Many of those are still around. Some are not.

If you're thinking of going into word processing, you might wonder, is there room for me? Yes, there is. There is room for you if you dedicate yourself to providing a good product to your customers. I hope that doesn't sound like a cop-out answer, because I mean it. If you conscientiously provide good work, you will eventually acquire a customer base you can rely on. But you should be aware that, to a degree, there is a glut. And you can expect a trickle of customers at the beginning rather than a flood. Later, I will suggest how you can negotiate your way through that glut. But for now let's get into the nitty-gritty of what you need to get started.

One good choice already

Since you are reading this in *Profiles*, I know you own a Kaypro. Congratulations. You already have an excellent computer for working in this field. The Kaypro provides everything you need in a computer for running a word processing service. Everything. And its low price helps keep your overhead low.

Low overhead is important for someone just getting started. Let me be very clear as to why. The people now providing word processing have already attracted the loyalty of many of the available customers. It will take a while for you to attract your share of the work. In the meantime, your expenses need to be kept low enough that you can manage them.

This may sound like obvious advice. But it is amazing how few people heed it. People regularly try to start up a word processing service by taking out ads several column inches long in every available paper and buying the shiniest and fastest equipment. And they usually drop out a month or two after discovering they cannot find the business to keep up with their lofty bills.

The hardware you don't have

After the computer, the most important tool is the printer. You will need letter quality. Your customers may not have heard of "dot matrix," but they know they don't want that funny looking computer print.

There is a situation, however, where a dot matrix printer can come in handy. This is when you are printing the first draft of a thesis or dissertation. Some customers don't mind if you use dot matrix for this, if they are assured they will get letter-quality print for the final copy.

The minimum of printer features you will need are sub- and superscript, underlining, and the flexibility to accept both pica and elite print wheels. Boldface is also a nice feature to have on hand.

As for printer speed, well, the faster the better. Buy as much speed as you can afford, but don't worry if you can't get the fastest thing in the galaxy. I'm using a Transtar 130, which has proved itself to be a reliable workhorse, cranking out page after page without a hitch. But it isn't the fastest, printing a page of text in a little less than two minutes (while waiting to roll in the next sheet of paper, I perform little spurts of housework).

There are ways to get around this problem of printing speed. A sheet feeder attachment is available for some printers; it feeds single sheets of paper to the printer automatically. The other method is to use tractor-fed high quality bond. Both ways offer

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freedom from waiting, but also add to your cost.

Related to the subject of speed, there is one thing I should mention about the Kaypro. If you bought yours before they built them with 4 Mghz clocks, you got one of the slowest professional computers on the market, clocking in at 2.5 Mghz. The slower clock speed increases the time it takes your Kaypro to accomplish its tasks—everything from calling up a file to formatting. This might be manageable. But every time you find an error after printing, for example, and every time you recall that file onto the screen, write in the correction, reformat, then restart the printing process, that slower clock speed piles minutes onto the time that job will take.

Fortunately, there exists a simple remedy. A speed-up kit is put out by the folks at *Micro Cornucopia* for $50.00. You can read all about it in an article, which includes explicit instructions on how to install it, in the March 1984 issue of *Microcomputing*. This is one upgrade that is definitely worth the money.

Okay, now that we've covered the basics in equipment, the next place to turn our attention is the market.

The market and advertising

The real hotbed for word processing is situated around universities, because students are the main buyers of this service. Those who will use your service either do not know how to type or they want neater, more error-free copy than they can provide themselves.

Students are the main buyers of this service.

Local businesses may be a source of revenue as well. I won't say the potential can't be developed. But most businesses hire employees to work for them, and are not accustomed to sending their work out to someone's home.

Assuming you live around a college or university, your first step to getting customers is to take an ad out in the campus paper. Write a clear, descriptive ad and run and rerun it that way consistently. The purpose of this consistency is to acquire a tag that people can remember you by. You can't acquire that if you keep changing the format of your ad.

Your ad should have a professional tone. If you can add a little flair to it, fine. But it doesn't pay to be too clever or make too pretentious claims. For example, something like—"Word Artisans will craft your words into a work of art," probably won't bring in a lot of customers.

It is helpful to include your name in the ad. People appreciate having someone to ask for when they call up. As for including your rates, no one here in Lawrence does that. I don't really know why, because our rates are all basically the same.

Rates

Just how much should you charge? And how should you calculate your bill? By the page, the line, or by the hour? I charge by the character. Eight hundredths of a cent per character to be exact. That translates into about $1.25 for a double spaced page of pica, which keeps me competitive with the rates of typists here.

There are some very good reasons for charging by the character. First, it is an accurate and efficient way to calculate the bill. You don't have to worry about what to charge for pages that are only half full, or pages that have extra text because of single spaced quotations. You also don't have to worry whether you have used elite or pica type (elite will give more text per page). All you have to do is check the number of characters in the file and multiply that figure by .0008 (e.g. 10K = 10,000 x .0008 = $8.00).

Where character sum information is depends on which word processor is used. Perfect Writer uses its Status Line to give a readout on file-length-in-characters. In WordStar, first you must finish the file then save it on disk. Re-open the file in Non-Document Mode (N), go to the end of the file (CTRL-QC), and the figure is on the Status Line labeled FC (file character).

There are some word processors in town who charge by the hour. Ten dollars an hour is the standard here. It's a fair way to charge for your service because it guarantees payment for the *time spent* on a job.

I do not charge on a time basis, however, (except for revision, which I'll get to later) because of feedback from some of my customers. There is something so intangible about the amount of work done in a period of time: people wonder if the typist couldn't have gone just a little faster and charged a little less. To alleviate this anxiety, I keep my rates pegged to something concrete, something I can actually pull up on the screen and show.

For tables my charge is double: $.0016 per character. Tables are so tedious and difficult to do on a computer that a charge of three times your normal

FOREWORD
(continued from page 17)

qualified to write a well-organized, lucid, succinct, and catchy manuscript on any of the above, then please follow the directions in this issue's "Writing for *PROFILES*," and send us a query.

This issue

Though this issue is full of articles worthy of discussion here, I'm afraid that space allows me only a few words on the piece to which I have some personal attachment. Laird Mooney's "Kaypro Wins Big in Reno" is near and dear to me, because as one of my top management students ever, Laird has become a much respected friend. Laird first caught my attention, when, after announcing the Reno Team trials to my operations research class, I saw his as the only hand waving—no, it was flailing! After subsequently acing all my exams for that course, and acing the exam I was asked to give to the Reno forecasting aspirants, Laird was my first recommendation to the team's faculty advisor—my close friend since high school, Dr. Steven Jenner. (So much for attempts to hire a new editor with no conflicts of interest.) Well, one thing lead to another, and the rest is history—history which I hope you'll enjoy reading about in this month's issue. □

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(continued from page 47)

rate would still be fair.

For revising, I do charge by the hour. Ten dollars. I don't see an alternative to the hourly rate since there is no way to keep track of the characters worked with. They are being added and deleted during the revision process.

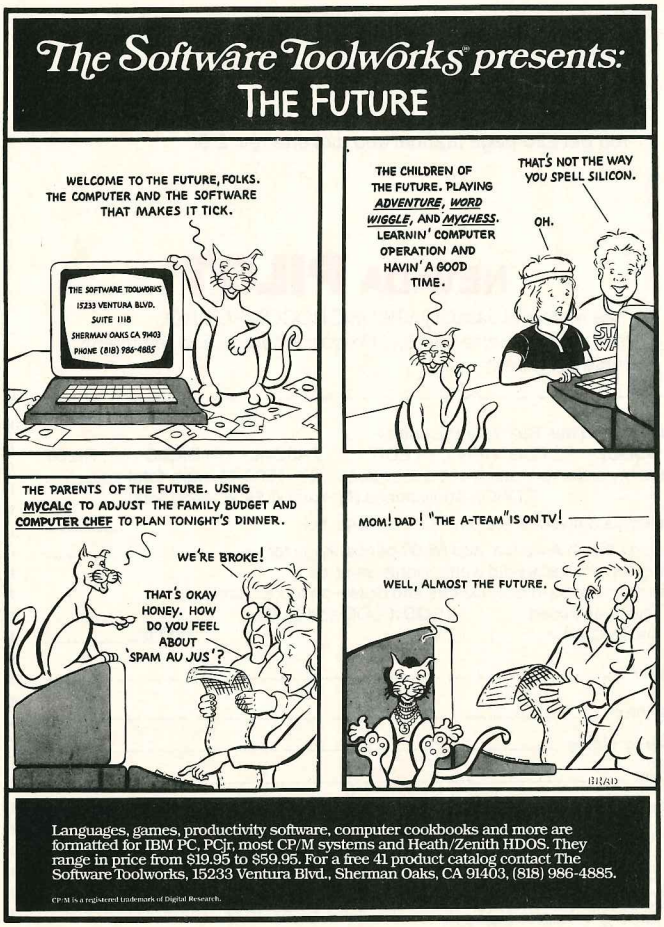
Keep in mind that rates vary around the country. The rates I have given here are in line with what people in the Midwest charge. Friends of mine in San Francisco tell me that $1.85 a page is the going rate for typing, and that fifteen dollars an hour is common for word processing.

Relating well

Customers are your bread and butter. When you relate with your customers, you should be aware of one thing. If your customers get bad feelings from you, they will not come back, and they'll probably discourage others from bringing you their business. That's just the way it is.

But it also doesn't pay to put on a syrupy smile and say nice things you really don't mean. I have actually gained some customers because they were put off by the sweet syrup of one of my competitors.

I have found that it's best to tell yourself that each customer is a friend. One with whom you share a common concern that the work he has given you be as neat and error-free as possible. If you transmit this attitude with sincerity and warmth, your customer will never consider taking his typing to someone else.



Now, I would like to remind you of something I brought up at the beginning of this article. Remember when I suggested there was a way to negotiate yourself through the glut that had formed in home word processing? Well, I just gave you a pretty good indication of the way. If you convince the people who pay your fee that you are as concerned about professional, error-free copy as they are, then positive word will get around. And your business will take root and grow.

When something goes wrong

That's enough about customer relations in general. Let's get down to some specifics. Have you noticed how terms like "error" and "error-free" began to pop up when we started talking to the customer? That's because if there is anything that dominates the customer's mind when he pays for word processing, it is the dreaded error.

I had thought that when I got a word processor, I would produce absolutely error-free text. Well, it hasn't always worked out that way. Now and then a "thee" sneaks in that should have been a "there," or an "s" gets tacked on to a word that doesn't need one.

The reaction of your customers to finding a mistake will vary. Most will be quite congenial about it, though of course they will want the error corrected. But there will be others who will seem amazed that anyone could have possibly screwed up so badly. (Don't worry, they are in the minority.)

What is most important, however, is not their reaction, but *yours*. You should never let anyone put you on the defensive, (though when someone is scrutinizing your work one word at a time, it's pretty easy to become defensive). Simply correct the error and reprint the page promptly. That alone will often win customers to your side and send them to others with rave reviews.

Some errors, however, will occasionally be found in the final copy for which you cannot be held at fault. Perhaps the handwriting was illegible, or the customer did not write what he thought he wrote. In instances like this, sometimes the customer will still fault you for the error.

A good strategy to take, when this arises, is to ask to look at the original copy to assure both of you what, exactly, the error was. If it is the case of bad

(continued on page 52)

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handwriting—for example an "a" looking like a "y"—point that out; or if it was a matter of your simply typing the text exactly as it was given to you, point that out too. You don't want to put anyone on the defensive, but you also don't want the customer going away blaming you for something that was not of your doing.

Rewards

If things sometimes get a bit unpleasant, to make it easier, just remember—you're being paid for this. Which brings us to a topic of major interest: How much can you expect to make?

The first month I opened shop, I brought in $40 (I told you things start slowly). After three months, I averaged $100 a month. After 8 months, I was up to $200-300 a month. And now I am pushing $500 a month. Keep in mind that these are Midwest figures. On either coast, with the higher rates, after plying my trade for a year and a half, I would probably be making an average of $750-$800. When you consider that expenses still have to be taken out of this, that is not yet a living wage.

Freelance word processing is often not a full-time job in itself, at least not in the beginning. Many of the typists and word processors in this town hold other jobs. A common situation is secretaries who work at the university during the day and do typing at home evenings and weekends. Some people do make a good living doing nothing but word processing. But they have been at it long enough to acquire enough business to keep them busy year-round.

Well, that's the story. Should you decide to go ahead and do word processing on a professional basis, you've already got a fine tool in your Kaypro. Add a good printer. Write up a distinct, professional ad and put it in the paper. When you get customers, treat them well. Little jobs and little checks will lead to bigger jobs and bigger checks. Be patient, and you'll do just fine □

Tod Westcott has run a successful word processing and editing service out of his home for over a year now. He is also a freelance writer focusing on the subjects of creativity and decision-making.

Oops!

Here are the corrections.

by Tom Enright

Well friends, it looks like we did it again. "The Word Plus Connection" in the September issue, had a small mistake, though our letters suggest that some of you got it running anyway. We'll try to correct the misinformation as well as add new information for WordStar 3.3 and 3.0 owners.

Easier ways

Patching WordStar isn't the only way to use The Word Plus in place of SpellStar. By far the easiest way is to simply use the R option (run a program) from the NO FILE MENU.

Another way is to rename TW.COM to SPELSTAR.OVR. This causes WordStar to find The Word Plus instead of SpellStar when you select S (run SpellStar) from the NO FILE MENU. WordStar thinks it's running SpellStar; you know that it's actually The Word Plus.

The last method is to actually change which program WordStar looks for when you select the S option. You can make it search for TW.COM instead of SPELSTAR.OVR, doing away with renaming things altogether.

A warning

The disadvantage to renaming The Word Plus is that it cannot be run from the A> prompt anymore. Also, if you patch WordStar to look for TW.COM rather than SPELSTAR.OVR, you won't be able to use any "User Defined Dictionaries." You get the main dictionary only. So if you use specialized dictionaries, *don't* rename TW.COM or do the patch.

The corrections

In the article as printed , instructions were given to rename TW.COM to THEWORD+.COM. *Don't do it*; renaming the program accomplishes nothing. The rest of these corrections are based on the filename remaining in its original form. We will give

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two forms of the command for starting DDT, one for Kaypro 10 owners, and one for Kaypro 4 owners.

Some background on who can benefit from this patch. If you have a Kaypro 2, forget it. Kaypro 2 diskettes don't hold enough for WordStar and The Word Plus to both fit on one diskette. For Kaypro 10s and 4s, all is well.

The patch

If you have a Kaypro 4, put a CP/M diskette in drive A and a WordStar working diskette in drive B. (Kaypro 10 owners don't have to worry about this.) Kaypro 10 owners should now type the command **DDT WSOVLY1.OVR** and press RETURN; Kaypro 4 owners, type **DDT B:WSOVLY1.OVR** and press RETURN.

WordStar 3.0 owners will see:

```
DDT VERS 2.2
NEXT PC

8900 0100
-
```

The "-" is DDT's version of the A> prompt. Now enter:

```
S2814
```

From here on, enter whatever appears in boldface type.

```
2814 53 54
2815 50 57
2816 45 20
2817 4C 20
2818 53 20
2819 54 20
281A 41 20
281B 52 20
281C 4F 43
281D 56 4F
281E 52 4D
281F 00 .    (Yes it's a period.)
-G0
```

The "GØ" causes a Warm Boot and returns you to the A> prompt. Kaypro 10 owner's, now enter **SAVE 136 WSOVLY1.OVR** and press RETURN; Kaypro 4 owner's— enter **SAVE B:WSOVLY1.OVR** and press RETURN.

WordStar 3.3 owners will see:

```
DDT VERS 2.2
NEXT PC
8400 0100
-
```

Next, you should enter:

```
S2817
```

Enter the parts in boldface.

```
2817 53 54
2818 50 57
```

(continued on page 81)

CASH IN! ON REAL TIME INVENTORY CONTROL

THE ARBA REGISTER:
IT'S A REAL CASH REGISTER. NOT JUST A CASH DRAWER.
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Inventory Control for as many as 18,000 items in 99 departments. On a KayPro 10® brought to you by ARBA Retail Systems.

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Micro Cornucopia . . .

KAYPRO USERS DISKS
for KayPro II, 4 and 10

$12.00 each

The following are full disks of software assembled for the KayPro. Each program has a .DOC (documentation) file and many come with source.

KayPro Disk K1
Modem software

This disk is absolutely priceless if you will be using a modem to communicate with bulletin boards, other micros or mainframes.
MODEMPAT. COM: Menu selection of baud rate, bits/character, stop bits, & parity for serial port.
MODEM7.COM: Very popular MODEM 7 configured for KayPro.
MODEM7+.COM: This is MODEM7 & MODEMPAT combined - you can communicate with anything!
KMDM795.COM: Super-version of MODEM7 set up for KayPro.
TERM.MAC: Commented disassembly of the TERM program you get with your KayPro so you can configure it for any interface.
SQ/USQ.COM: Programs to squeeze and unsqueeze files for faster transfer.

KayPro Disk K2
Utilities

Really oodles of spiffy little (and big) programs to help you get full use of your KayPro.
ZESOURCE.COM: A true Zilog format disassembler for 8080 and Z80 object(.COM) files. Now you can turn .COM files into . MAC files.
UNERA.COM: Simply enter "UNERA" followed by the name of the file you just erased and presto, the erased file is back! A lifesaver.
FINDBD54.COM: Checks an entire disk, reports bad sectors, and then creates a special file containing those sectors. You save a bundle on disks.
CAT2: This a group of programs which create and maintain a single directory of all the programs you have on all your disks. Even keeps track of which programs are backed up and which aren't.
UNSPOOL.COM: Use your KayPro II and print files at the same time. Doesn't slow down system response!
DUMPX, DU-77, COMPARE, SUPERSUB, FORMFEED, DIR-DUMP, . . . and all have documentation on disk.

KayPro Disk K3
Games

PACMAN.COM: Despite the KayPro's lack of graphics, this one looks and plays amazingly like the real thing! Keep it hidden.
ZCHESS.COM: Chess with a 1-6 level look ahead.
OTHELLO.COM: You learn it in minutes, master it in years.
BIO.COM: Generates custom graphic biorhythm.
MM.COM: Master Mind.
WUMPUS.COM: Classic wumpus hunting.

KayPro Disk K4
Adventure

This disk contains one 191K game, Adventure.
ADV.COM: This is the latest, greatest, most cussed adventure ever devised by half-mortals. This is the 550-point version so the cave is greatly expanded and the creatures are much smarter.

KayPro Disk K5
MX-80 Graphics

A complete Epson MX-80 printer graphics package including example files. (Same as K19.)

KayPro Disk K6
Word Processing Utilities

A powerful line oriented text editor that looks like Unix's EX, plus a scad of text utilities written in C which handles pretty printing, shortening a file, multiple space output, add tabs, remove trailing whitespace, and more. Also includes **ROFF.COM** a very neat text formatter.

KayPro Disk K7
Small C Version 2 Compiler

This is a greatly extended version of Ron Cain's Small C compiler. Version 2 has more expressions and larger library, true subset of Unix C. Disk contains compiler, documentation, and library—everything you need.

KayPro Disk K8
Small C Version 2 Source

This disk contains the source (written in Small C) of the Small C version 2 compiler. Get K8 if you want to try extending the compiler. (You must have K7.)

KayPro Disk K9
ZCPR

ZCPR: The big news on this disk is the self-installing version ZCPR available only from Micro C. Once you have ZCPR in your CP/M, you'll never go back to straight CP/M! For instance, ZCPR searches drive A for any program not found on drive B, so, even an empty disk in drive B appears to contain every program on A. It's great for text editors, compilers, etc. Works on KayPro II and 4.
EX14: a super replacement for SUBMIT.
Plus many more: **TREK, FIX, FIND, SNOOPY ALIENS and DIF2.**

KayPro Disk K10
Assemblers

We've received a lot of requests for a Z80 assembler. So Dana put in some long hours getting the Crowe Z80 assembler to run on the KayPro (and every other Z80 machine).
CROWECPM: This is a first class Z80 assembler. We use this assembler daily (and we included its source). Takes standard Zilog mnemonics.
LASM: This is a more powerful version of the ASM assembler you received with the KayPro. This will link multiple programs together at assembly time.
PRINTPRN: This program makes it easy to print the listing files generated by the Crowe assembler.

KayPro Disk K11
Library & Checkbook Programs

CHECKS: This has been a very popular group of programs. Categorizes checks so you can keep track which are tax deductible and which get charged to which projects. Includes source and excellent example check files. Very powerful.
LIBR: This is a complete set of library routines which let you group files into a single file called a library. Then CP/M sees them as a single program, but with the library routines, you can list them out separately, run them separately, or divide them up again. Almost like a unix environment.
DISPLAY, VLIST, PGLST: Additional screen and print utilities.

KayPro Disk K12
FORTH

Yep, this is FORTH, one of the most unique, most extendable languages known, and for a paltry $12.00. This disk contains not just one FORTH, but two, along with an editor, decompiler and 8080 assembler! The editor even uses the cursor control keys.
FORTH: This is true fig-FORTH.
KFORTH: A very nicely extended version of fig-FORTH.
PLUS, all the rest of the FORTH goodies. (Forth Heaven!)

KayPro Disk K13
Source of fig-FORTH

All this disk contains is the 40K ASM source of fig-FORTH with the hooks in place for the KayPro. This disk is for FORTH hackers who just can't leave anything alone. (Look, you probably have faults, too.) The source of FORTH is here because there isn't room on K12. This is the only disk that isn't stuffed.

KayPro Disk K14
Smartmodem Programs

This is the disk for you if you have a Smartmodem compatible modem.
SMODEMK: Smartmodem program set up for the KayPro (and source).
XMODEM: Lets you remotely control your KayPro from a distant computer.
KAYTERM: This is the information you need to run or write modem software on the KayPro.

KayPro Disk K15
Hard Disk Utilities

This disk is for the KayPro 10 or any KayPro with a Winchester drive. With these routines you can not only backup files (with printed directories of the backup disks), you can also break up large files. The backed-up files are not encoded (as they are with KayPro's backup routine) so you can access them on any system.

KayPro Disk K16
Pascal Compiler

This is a real Pascal compiler. It supports only a subset of the language (no records, pointers, booleans, reals or complex) but it generates a real .COM file. Everything is on this disk: the compiler, its source, example programs and documentation.

KayPro Disk K17
Z80 Tools

This is for those of you who are into Z80 assembly language.
XLATE.COM: A very good 8080 to Z80 translation routine.
DASM.COM: An easier to use version of ZZ-SOURCE (the Z80 disassembler). This full disk includes source and documentation for both routines.

KayPro Disk K18
System Diagnostics

Just as we finished editing the routines on this disk, we received a copy of KayPro's diagnostic disk. The memory test and drive exercise, routines on this disk are more powerful than KayPro's versions. (Plus, it's only $12!) Setup for KayPro II and 4.

KayPro Disk K19
Prowriter Graphics

This is a complete Prowriter printer graphics package written by the same Micro C subscriber who wrote the MX-80 graphics package. Plot points, lines, circles, boxes, and more. Examples, documentation.

Kaypro Disk K20
Color Graphics Routines

PACMAN.COM: This is a deluxe version of pacman for MicroSphere's color graphics board.
PIE.COM: Pie Chart generator.
SKETCH.COM An easy way to sketch color graphic designs. You can even use a joystick with this software (see Micro C issue #15 for joystick interface).

Kaypro Disk K21
SBASIC Routines & Screen Dump

SBASIC: Finally a disk of SBASIC software. There are some good examples of structured programming on this disk (including one program written both ways so you can see the difference).
SCREEN DUMP: This is a screen dump for all Kaypros new and old. You can buy a similar package elsewhere for $60.

Kaypro Disk K22
ZCPR (Again)

This disk is filled with ZPCR files. You get ZPCR for the Kaypro II, Kaypro 4, and the Kaypro 10. This version is fixed so that you can pass control characters (such as cntl-P) to the system and you can choose to have it recognize the semi-colon for drive select (as well as the colon). So you can enter "B;" or "B:" to select drive B. Super neat!
ZPCR, for those of you who don't know, makes CP/M a lot friendlier. It searches drive A for any .COM file it doesn't find on the current drive, the TYPE command scrolls text 24 lines at a time, and a new LIST command outputs a file to the printer.

Kaypro Disk K23
Fast Terminal Software & New BYE

This disk contains interrupt-driven terminal programs for all Kaypros. If you are tired of being limited to 1200 baud when you use your Kaypro as a terminal then take heart. With these programs, your Kaypro can outrun the big boys by receiving and sending up to 19,200 baud without dropping a single character!
Also, a new version of BYE that not only lets you run your Kaypro remotely, but also figures out whether you have a 63K or 64K system so it will run with any Kaypro using an external modem.

Something special for your Kaypro!

Kaypro Disk K24
MBASIC Games & Keyboard Translator

We sifted through many, many games before coming up with these gems. All will work on any Kaypro and all come in MBASIC source.

USOPEN shows you the fairway on the screen. You select the club and direction for each stroke. After you reach the green the display shifts to show details of the green and flag. For one to four players.

DUCK is an offshoot of aliens (pardon the pun). Hunter tries to shoot down ducks while ducks try to bomb the hunter. (Much fairer than real life.)

CASTLE is an adventure in which you select your attributes (strength, dexterity, and intelligence) and you get to purchase arms and protection. Great documentation and very interesting game.

KSTROKES is a keyboard translator similar to Smartkey. Bill Forbes did an excellent job creating this program. You can create and save translation files on disk. The program even includes a table which generates WordStar commands from the Kaypro's keypad! You can define 8 keystrokes at up to 63 characters each.

Kaypro Disk K25
Z80 Macro Assembler

This is a real Z80 macro assembler! Syntax closely follows RMAC and MAC. Also includes pseudo-ops to support conditional assembly etc. No .phase or relocatable code.

Kaypro Disk K26
EPROM Programmer & Character Editor

This is the software for the Kaypro EPROM programmer written up in Issue #18. This software and the programmer turn your Kaypro into a very powerful development system. You can read ROMs, write ROMs, save data on disk and restore data from disk. Plus, you get a character editor which will help you design custom character ROMs for the non-graphic Kaypros!

Kaypro Disk K27
Typing Tutor

A complete typing tutor for beginners and experts. Written in Australia, it comes complete with source. This was customized for Kaypro II, 4 and 10 by Barry Cole of WLAKUG.

The documentation says you can learn to touch type in 8 hours (probably a little longer for mortals).

NEW! **Kaypro Users Disk K28**
Modem 730

One of the most versatile modem programs available. Files and overlays are included to assemble a usable version of MDM730 for a Kaypro II, 4, or 10 using an external modem.

NEW!

New Schematic Packages

Finally, a complete schematic for your portable Kaypro, logically laid out on a single 24" by 36" sheet, plus a very complete illustrated Theory of Operation that's keyed to the schematic. You'll get detail information on your processor board that's available nowhere else.

For instance, those of you with the 10 and new 84 systems get a thorough rundown on your video section complete with sample video control programs in assembly language and Pascal. Of course, all packages contain serial and parallel port details and programming examples as well as complete coverage of the processor, clock, I/O, and disk controller (information that is not even available in Kaypro's own Dealer Service Manual!).

Kaypro Schematic Packages

Kaypro II & 4 (pre-84) **$20.00**
NEW! **Kaypro 10 (pre-84)** **$20.00**
NEW! **Kaypro 84 series (II,4,10)** **$20.00**
All prices include Postage

Micro Cornucopia Magazine

Want to speed up your KayPro? Want to find out what's going on under the KayPro's hood? Want to know who's selling good products and providing good support (and who isn't)? Want to find really inexpensive software? Then you're in the right place.

Micro Cornucopia (Micro C) is the friendly journal for those of you who want to stay abreast of the latest information on KayPros and other single board systems, or want to upgrade your KayPro yourself without paying an arm and a leg. We have regular columns on Pascal, C, S-BASIC, FORTH as well as the popular "On Your Own" feature for those of you who plan to make the KayPro your ticket to independence.

You can get all this and more when you order the special $2.00 sample copy. In fact, you'll even find out how to turn a KayPro II into a KayPro 4 (or KayPro 8).

Edited and published by David Thompson

Subscription Rates

1 yr. (6 issues - bulk rate)	$16.00
1 yr. (6 issues - first class)	$22.00
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1 yr. (other foreign)	$30.00
Sample Issue (turn your II into a 4)	$ 2.00

Special Offer!

Your First Schematic Package (If you also order subscription) $10.00

Pro-8 ROM Package

The PRO-8 package from Micro Cornucopia upgrades your KayPro 4 to a KayPro 8 with 784K bytes (96 directory entries) per Tandon 100-4 (or equivalent) quad-density drive. Plus, you can select your own cursor character (and change it at will).

The package includes the new PRO-8 monitor ROM, a disk of formatters and copiers, and printed instructions. (We even tell you how to turn your KayPro II into a KayPro 4.) All you add is one or two double-sided double-density (390K), or double-sided quad-density (784K) drives. You get over 1.5 Megabytes on a two-drive quad-density system!

This new system can read, write, and format KayPro II and KayPro 4 disks as well as KayPro 8 disks. And it recognizes each disk type automatically!

All this for only **$49.95!**

Watch Micro Cornucopia for more KayPro compatibles.
Call or write for information on the other KayPro II and 4 ROMS from Micro Cornucopia.

Plus-4 Decoder Board

With this nifty little plug-in board, your Pro-8 ROM can access up to four 5¼" drives. You just plug a four-drive 34-pin cable into this board and you can add up to two additional drives.

Now you can run any mix of 191K, 390K, and 784K drives as drives A, B, C, and D. You can run your original drives as A and B then add 380K or 784K drives outboard as C and D. You can even run four half-wides inside your original Kaypro!

The Plus-4 Decoder Board for only **$39.95**

Watch for 4-84 and 10-84 compatible ROMs coming soon.

To order, send check, money order (US funds), or VISA/MasterCard number and expiration date.
Prices include postage and handling.

Micro Cornucopia

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Monday-Friday

Records to Disk via DataStar

Introducing WordStar's database manager, and its helper, ReportStar.

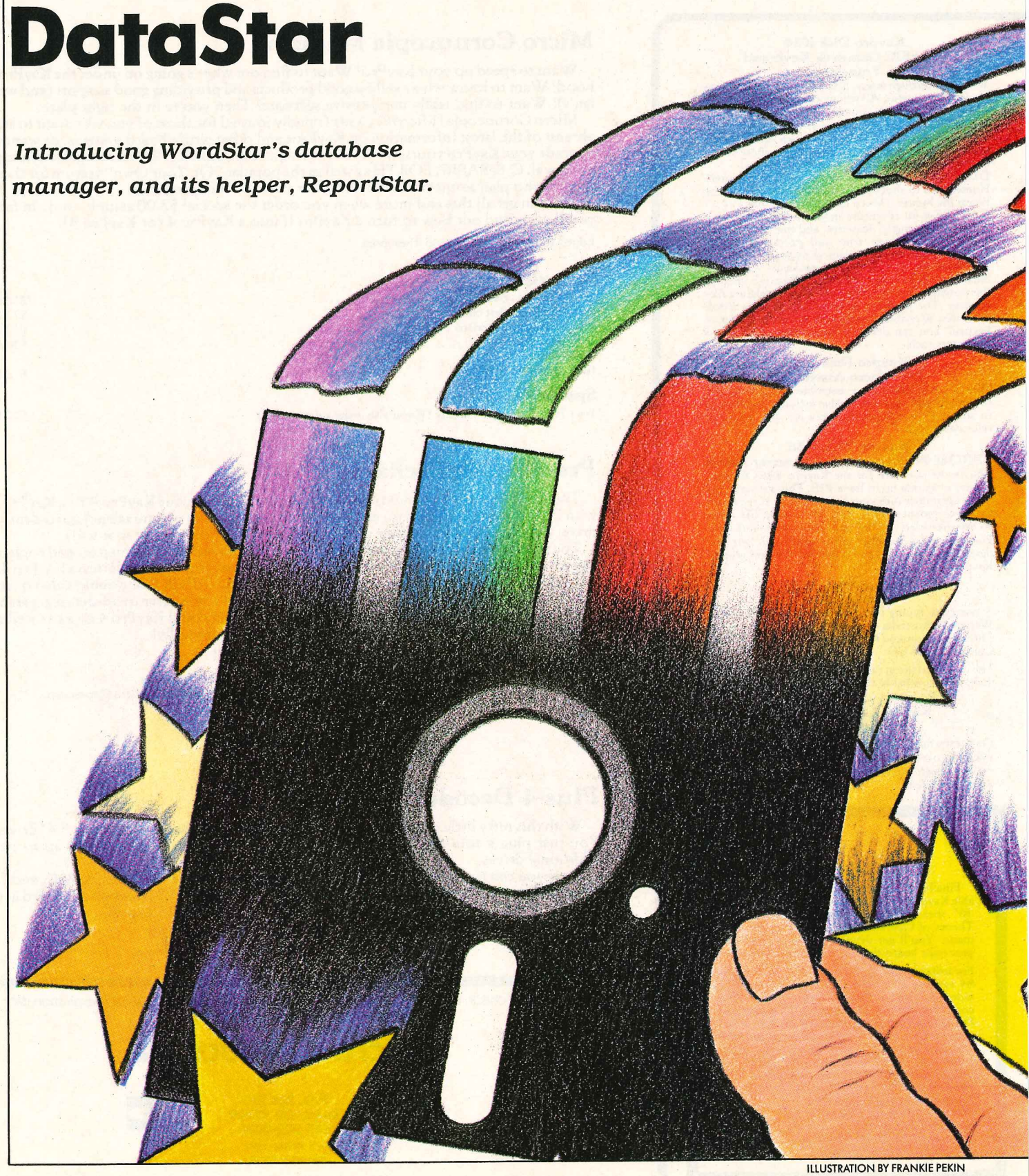
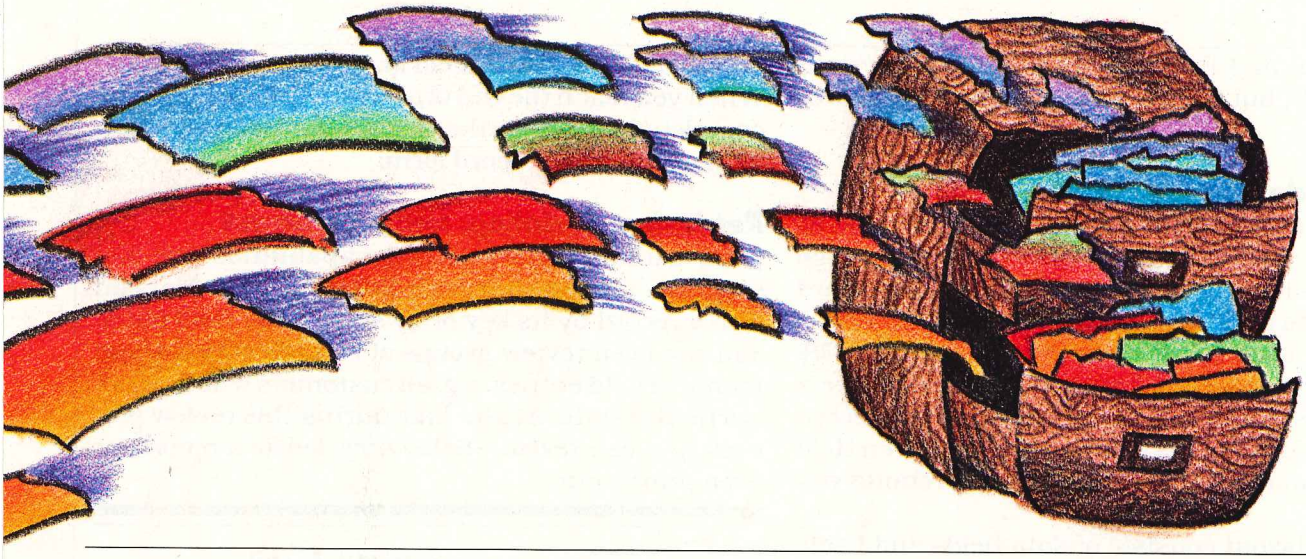


ILLUSTRATION BY FRANKIE PEKIN



by Joseph Comanda

Word has it that a good many Kaypro owners buy their computers to do word processing and never bother with the other programs. If so, that's a pity. The Kaypro package contains a lot of useful software that can help you organize your life or business. DataStar is a good example. If you keep records of any kind—whether on the backs of envelopes or in file drawers— DataStar can computerize that task. It makes a good beginning program too; it's easy enough for the casual user to learn, yet sophisticated enough for business applications.

It's a good idea to use DataStar to create MailMerge datafiles.

DataStar replaced Perfect Filer in the old software bundle. At its simplest, it functions, like Perfect Filer, as a list manager, storing records full of information (or data) in datafiles much the same way you would store index cards in a file box. Let's say you want to keep track of customers. With a file box system, you type up a bunch of cards with the customer information arranged in a uniform way and then stick them in a box. With a list manager, the whole job is done on the computer.

First, you design a record form like the one in Figure 1 (see page 66). Then you use the form to fill in records which are stored on the disk in a datafile.

Generally, list managers only handle one datafile at a time (Perfect Filer will only work with one datafile per disk or user area), but DataStar can deal with several datafiles, transferring information from one to another. For example, the Invoice Record Form (see Figure 2 on page 66) is set up to pull information from both a customer file and an inventory file.

Even as a list manager, DataStar is more versatile than Perfect Filer. For one thing, it performs calculations. It can also work with records individually or in batches, and it can print out records, making it suitable for producing invoices or receipts.

It has a larger capacity than Perfect Filer too. Officially, its size limit for a datafile is eight megabytes, and it handles record forms up to 255 columns wide and 255 lines in length with as many as 245 separate fields. In practice, you would be wise to work with more modest limits.

DataStar can also interact with other MicroPro products. Its records can use numbers stored in CalcStar spreadsheets, and its datafiles have the same structure as MailMerge datafiles. That means they can be used with WordStar to generate personalized form letters. In fact, it's a good idea to use DataStar to create MailMerge datafiles. This is because DataStar features automatic fill-in of repeating fields and the field names on record forms serve as helpful prompts. This simplifies the data entry process, eliminating a lot of errors.

One thing DataStar can't do by itself is produce reports. MicroPro has solved this by linking it to ReportStar, an excellent report generator (though this is small comfort to Kaypro 2 owners who don't get it in their bundles). With ReportStar, you can design anything from simple listings of the information in DataStar files, to mailing labels, to complex reports capable of merging several datafiles or doing automatic updating. ReportStar is still no match for

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the programming flexibility of a database system like dBASE II, but it adds some impressive features to DataStar.

Creating a datafile

Setting up record-keeping with DataStar can be as simple or as complex as you wish. Either way, you go through two basic processes: designing the record form and then adding records to the datafile.

DataStar uses a special program called FORMGEN to design record forms. It works a lot like a word processor, letting you roam around the screen laying out your form. Its Status Line, Onscreen Help Menus, and many of the commands will remind you of WordStar.

The form layout consists of data fields and background text. Data fields are the places you will later enter information to be stored. You indicate their location and maximum length by using underlining.

The background text is everything else, e.g. any title, labels, or instructions. None of this is required, and none of it is stored in the datafile, but it makes the record easier to read. With the new Kaypro screen, you can even choose to highlight portions of the background text by displaying it with inverse video.

The last step in designing a simple record is selecting the key field. Using the file box analogy, a key is the name, title, code, or number used to order the index cards alphabetically or numerically. DataStar doesn't store records in key (or index) order, but it creates an index file (a kind of internal directory) to search for records in alphabetical or numerical order by key. (Note: DataStar creates three files for every datafile. First, it saves the record form in a form definition file with the suffix DEF. Then when you begin filling in records, it creates two more files to handle them. It stores the records in a datafile with the suffix DTA, and it uses an index file with the suffix NDX to keep track of the record locations. Thus the customer file set consists of CUSTOMER.DEF, CUSTOMER.DTA, and CUSTOMER.NDX.)

In the Customer Record Form, the customer number is the key field. Alternately, you could choose the last name or a combination of last and first name. In that case, DataStar uses the contents of both fields to form a single key.

Once you've saved a record form definition, you can begin entering records into a datafile. This is a simple procedure, comparable to filling out a form on paper. You use DataStar's Add Mode to summon a blank record form onto the screen, and the cursor takes you from field to field as you fill in the blanks. When you reach the end of a form, DataStar adds the completed record to the datafile and presents you with a new blank record form.

Retrieving, updating, and printing out

Even without report-writing capabilities you can still do a fair amount with DataStar files. You can find a record by its key or by some other field entry. You can even review groups of records which share identical field entries, e.g. all customers who live in a particular state. At any time during this review process, you can revise a field entry, delete a record, or even print it out.

You can print just the data (handy for pre-printed forms).

The print-out feature is especially nice for invoices or receipts. You can print a single record or a designated group of records. This latter option lets you print all the invoices for a particular time period. You can also choose between printing the whole form (background text and data) or just the data (handy for pre-printed forms).

Advanced features

In any business situation, you probably work with a number of related files. DataStar lets you do that too. The Invoice Record Form (see Figure 2) has been set up to derive information from product (or inventory) and customer records.

At record-entry time, when you fill in the customer number, DataStar automatically enters the rest of the customer information from the customer's record (including the balance due figure which it puts into the Previous Balance Due field in the invoice record). Similarly, when you enter the product code, DataStar fills in the unit price.

The invoice form also uses calculations. For example, the total price is calculated using the quantity ordered and the unit price.

To link datafiles and do calculations you must use a FORMGEN process called "assigning attributes." Novices may bypass it altogether, but experienced designers can use it to take advantage of DataStar's more sophisticated features. In this process, FORMGEN helps you further define fields in a record form by leading you through a series of prompts with optional explanations. Here is a partial list of

(continued from page 62)

FREE

With Your Order For Any 2 Or More Items On These next 3 Pages Get a

Giant 12 Foot Coiled Extension Cord for Your Kaypro keyboard

Send for your free cord today.
Enjoy that detachable keyboard.
One Free Cord Per Customer

Regarding this coiled retractible cord: Don't be fooled by cheap imitations. This cord has been specially manufactured to match the unique electrical requirements of the Kaypro computer and meets demanding Kaypro-like specs. It is guaranteed to work with every model Kaypro II, IV, and 10. Don't settle for less from copycat advertisers. Other cords will fail and may hurt your system. Order your free cord today.

This free offer applies to any 2 or more separate items. For example, a Kaypro Quality Cover and one template equals 2 items; 2 templates equal 2 items, but a single box of diskettes is one item. We must reserve the right to end this offer. Don't be disappointed, order today. 12 foot cords sold separately at $12.95 per cord.

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Introducing A Classic Form Fitting Kaypro Cover

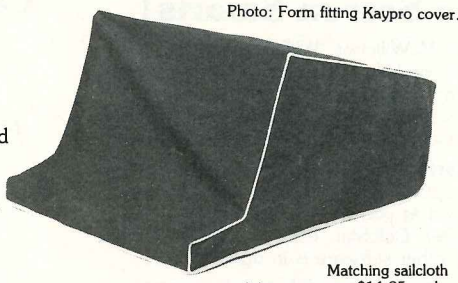


Photo: Form fitting Kaypro cover.

At last, the classic Kaypro dust cover you'll be proud to own and use. This first rate computer cover is made from a premium, lint free, static free, washable, free breathing, and fade resistant sailcloth. It comes in a rich looking Navy blue or Royal blue, and has a smart contrasting silver gray piping and trim that adds a superior finished look. Made to form fit and protect a Kaypro that is set up and ready to use.

Matching sailcloth printer covers are $14.95 each. Complete list sent with order.
New. Special two-piece Kaypro sailcloth cover. Set covers CPU and keyboard. $19.95 per set.

For a limited time only, your price for this factory direct, custom made, sailcloth Quality Cover is $16.95. When ordering, remember to indicate color preference. This special low price is subject to change. You must be completely satisfied with this cover or we'll refund your money immediately. Order today.

- Quality tailoring
- Easy care fabrics
- Attractive colors
- Professional appeal

Richly tailored inside and out. Look inside any of our Quality Covers; see the ultimate finishing; we use machines that sew with 3 needles so that no edge will ever unravel or shed lint. We stress perfection because you deserve the best. Compare for long-lasting satisfaction.

FACTORY DIRECT

Kleertex®

- $18.95 for one
- $35.00 for two
- $49.95 for three
- Why pay more?

Learn Software Commands Super, Super Fast!

Now Available:
Wordstar/MailMerge
dBase II

Time-saving Kleertex templates are made from a durable, non-glare plastic, and can be put on and lifted off the keyboard instantly. The software commands on Kleertex templates are easy to read and are conveniently arranged in alphabetical order. With a Kleertex template on your keyboard, software commands are only a glance away, at your fingertips. This makes it easy to learn programs that come with your Kaypro. Stop going back to the book to get a software command. Now you can learn software commands super fast, so you can make better use of your powerful programs. The expertly organized Wordstar/Mailmerge template, for example, gets you into word processing in half the time. A special dBase II template cuts through the learning curve like a knife and gets you programming sooner. Kleertex templates for Perfect Writer/Filer and Perfect Calc get you moving fast on these programs too. Once you try Kleertex templates, you'll wonder how you ever got along without these useful tools. Central's special price for one template is $18.95. Choose any two templates for $35 and save. If you like, you may combine purchase of any of these four templates for super savings. Complete satisfaction is guaranteed or money-back. Makes learning software a breeze. Great value. Order today.

Enemies of Kaypro®... Spikes, Surges, and Noise!

"Spikes and surges can be the greatest threat to your computer outside a 4 year old child with a jelly sandwich aimed for the disk drive slot."

Photo:
Panamax
6 outlets LC S RB NF.

The Kaypro has enemies. But now you can protect it from the mish mash of electrical currents that race through your home or business. Powerful up-surges of current can actually blow out your machine. Less powerful, barely noticeable spikes, surges, and noise can silently degrade your system in time, ruining chips, destroying data, and causing expensive service calls.

The Kaypro manual states, 'Line filtering will protect your Kaypro...from power surges or other undesirable occurrences from the power source." Surge protection will help your Kaypro provide years of trouble-free service. Also, if you plan to use your Kaypro to access information by modem, you must have a reliable high frequency noise (EMI/RFI) suppressor to insure against data loss and scrambling.

PANAMAX SURGE SUPPRESSORS

Description	List	Price
2 outlets, D NF	$ 79.00	$ 59.00
4 outlets, LC S RB NF	$109.00	$ 89.00
6 outlets, LC S RB NF	$119.00	$ 99.00
UltraMax, LC S UA NF	$159.00	$129.00
TeleMax, D 1OL 2PJ NF	$ 89.00	$ 72.00

D: Connects direct to grounded wall jack.
LC: Includes 6 foot long heavy duty line cord.
S: Includes illuminated on/off switch.
NF: Includes EMI/RFI noise filter.
RB: Includes reset button.
OL: Includes outlet.
PJ: Includes 2 phone jack receptacles.
UA: Includes under voltage alarm/brown out protection.
All units include the added security of a 4 amp fuse. Unique Panamax EMI/RFI noise filters provide protection in common and transverse mode. Essential for modem communications, multi-user stations, etc. All Panamax units are factory guaranteed for 60 months.

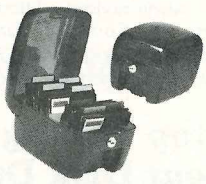
"Power line-associated problems are estimated to cause nearly 70 to 90 percent of the malfunctions in the IBM PC."

"Overvoltage can be fatal to both data and hardware alike."
P.C. Magazine, March 1983

There are many "toy" surge suppressors on the market. They are smartly colored, but beware. The performance difference is amazing. The best surge and noise suppressors on the market are made by Panamax. Our "Panamax Challenge Certificate" tells all. It is a startling comparison of Panamax quality with 11 other well-known brands. One aspect of this revealing report tells how Panamax responds to and cuts surges in 5 or less pico seconds, while most other suppressors respond at a comparatively slow 5 to 50 nanoseconds!

Check our regular low prices. Try the Panamax of your choice for 15 days. Receive the "Panamax Challenge Certificate" with your purchase. If not completely satisfied with your purchase, return for immediate full refund. Your Kaypro deserves Panamax protection, the best there is. Order today.

Lockable Diskette Defender



Handsome, sturdy, smoke-tinted acrylic tray holds 70 Kaypro-size diskettes. Flip-up lid keeps out dust, debris, and moisture, and locks securely to guard your important work. Comes with 7 dividers that make for easy filing and keep floppies upright to prevent bending, warping, and scratching. Tough metal lock never comes in contact with diskettes because it is enclosed in a plastic housing. Super value at $23.95 for one, or $22.95 each if you buy 2 or more. Keep prying eyes and sticky fingers away from your data. Order today.

Cables

Top quality, individually tested 36 pin Centronics-type standard parallel cables for all model Kaypros. These are made to work hard and long. Guaranteed.
5 ft cables ... $18.95 each
10 ft cables ... $24.95 each

Top quality, individually tested ribbon modem RS 232C cables designed with reinforced clamps for a sure continuous connection and made especially for your Kaypro. These work every time.
2 ft cables ... $14.95 each
5 ft cables ... $16.95 each

Free Screen Smarts!

Peter McWilliams, William Buckley, Steven Frankel, and a cast of thousands rave about how **SmartKey II** speeds up and improves accuracy in computing by reducing often used multiple keystrokes to single keys.

Smartkey II lets you easily reprogram as many upper and lower case keys on your keyboard as you want, even while WordStar, CalcStar, dBase II, Perfect Writer, or any other software is in operation.

Uses for this powerful, easy-to-operate program are endless. With SmartKey II you can assign up to 3,750 characters to a single key. Once you have redefined keys, you can put them to work or change them at will. You can also store your "smart key" definitions in a special file and use them later, or make numerous definition files to use with a variety of your favorite programs or projects. Imagine saving complex command codes, boilerplate paragraphs, sentences, names, inventory numbers, or whatever, and then injecting any of them into your work with the stroke of a single key. This is a must-have, time saving computer program for all busy Kaypro users.

SmartKey II has a little known super companion program called SmartPrint II. SmartPrint II retails at $49.95. SmartPrint lets you give single-stroke commands to your dot matrix printer to make it produce italics, greek characters, graphic symbols, boldface, underlining, extended typefaces, accent marks, and much more. SmartKey II retails at $89.95. Now, for a limited time only, Central's SmartKey II and SmartPrint II **combination pack** is only **$79.** In addition, as a bonus, with your purchase you will get a **free** copy of Paul Golding's book, *Screen Smarts, The Computer Tamer's Guide*. This book is a $15.95 value. It tells how Mr. Golding, a professional writer, uses SmartKey II to turn his humble computer into a supercharged dedicated word processor. Please don't delay, this offer may not be repeated. Order today to get SmartKey II, SmartPrint II, and a free copy of the newly revised edition of *Screen Smarts, The Computer Tamer's Guide*, fast.

Warning: SmartKey II makes lesser programs look dumb, dumb, dumb. Comes with step-by-step manual.

Stop Tearing Up Your Disk Drives!

If you're using your Kaypro as a printer buffer instead of a computer, you may be tearing up your disk drives. Disk drives are mechanical devices, they are often the first parts of a computer to go sour. No wonder. Everytime you feed your printer a file, the drives whirl madly until the printer has accepted the entire file. Sometimes this takes a long, long time.

If you're tired of hearing your disk drives grind down, you need a printer buffer. The best performance and price buffer on the market is the Consolink MicroSpooler. This computer-like tool absorbs files as fast as your computer can send them, and then patiently feeds or spools them to your printer a few bytes at a time.

The MicroSpooler is an intelligent, feature-packed buffer. It is easy to install and operate. Merely place it between your computer and printer, then connect it with two cables, and feed files as large as 64K within seconds to your letter quality or dot matrix printer. The instant the transfer is complete, you can operate your computer again. The MicroSpooler does the rest.

The MicroSpooler comes in a variety of configurations. You can link your Kaypro to any popular printer with two inexpensive cables. Please check our low MicroSpooler prices. You won't find a more feature-packed or reasonably priced spooler around. Try the MicroSpooler of your choice for 15 days. If you are not completely satisfied with your purchase, return it for an immediate full refund. Your Kaypro deserves this attractive and useful accessory. Order a compact and powerful MicroSpooler for your computer today. Works with all model computers.

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Save Money. Save Worry.

3M diskettes.
Certified
100% error-free.
Guaranteed for life.
Tested 327 ways.
They work like a charm on Kaypros.

Factory sealed. Best data diskette made.
3M — *One less thing to worry about.*

No minimums — No limits

Box of 10 SS-DD Kaypro II diskettes: **$18.00**
Box of 10 DS-DD Kaypro IV diskettes: **$23.00**
Box of 10 DS-DD Kaypro 10 diskettes: **$23.00**
3M Head Cleaning Kits for Kaypros: $21.95
3M DeskTop 24"x 26" Anti-Static Mats: $44.00

The Kaypro can dump a file faster than a printer can accept it. This device will catch the file, quiet the disk drives, and let you compute again.

CONSOLINK MICROSPOOLERS

Description	List	Price
64 K P-P	$315.00	$279.95
64 K P-S	$343.00	$299.95
64 K S-S	$349.00	$299.95
64 K S-P	$339.00	$294.95
Two Cables	$ 56.00	$ 29.00

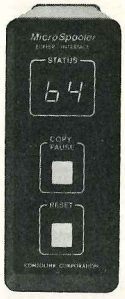

Photo:
MicroSpooler
64 K P-P

64 K	Stores and spools files as large as 64 K.
P-P	Parallel Kaypro port to parallel printer port.
P-S	Parallel Kaypro port to serial printer port.
S-S	Serial Kaypro port to serial printer port.
S-P	Serial Kaypro port to parallel printer port.
Cables	Set includes one special male to female connector and one male-male connector. *Please tell us model and type of printer you're connecting to your computer.

Includes these unique features:

- Status digital readout
- Multiple copy function
- Temporary pause function
- Sleek internal power supply
- Comprehensive self test routine
- Slimline attractive casing
- Front panel reset
- 12 month factory guarantee

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800-624-5628 CA

Product Description	List	Central
Kaypro Software		
ADVANCED MICRO TECH		
MicroLib	$295.00	$199.00
ATI TRAINING DISKS		
CP/M	$ 39.95	$ 34.00
MBasic	$ 39.95	$ 34.00
Microplan	$ 75.00	$ 59.00
Multiplan	$ 75.00	$ 59.00
Wordstar	$ 75.00	$ 59.00
BLUE CHIP SOFTWARE		
Millionaire	$ 59.95	$ 49.95
BORLAND INTERNATIONAL		
Turbo Pascal 2.0	$ 49.95	$ 47.95
ToolBox	$ 49.95	$ 47.95
CAXTON		
Cardbox	$245.00	$199.00
CHUCK ATKINSON PROGRAMS		
Quick Check	$ 95.00	$ 79.00
Quick Check + AR	$125.00	$155.00
Retail Inventory	$250.00	$199.00
Retail Inventory + Q Register	$395.00	$299.00
COMPUTER EDITYPE SYSTEMS		
Magic Print ★	$195.00	$155.00
Magic Bind ★	$250.00	$199.00
Magic Index — includes ★ All superior Wordstar enhancers	$295.00	$245.00
CDE SOFTWARE		
Checks & Balances	$ 54.95	$ 49.95
COMPUTRONICS		
VersaBusiness Series		
VersaLedger II	$149.95	$115.00
Any other modules	$ 99.95	$ 79.50
CONTINENTAL SOFTWARE		
Home Accountant Plus	$ 99.95	$ 79.95
DIGITAL MARKETING		
Bibliography ★	$ 99.00	$ 89.00
Datebook II	$295.00	$228.00
Footnote and Pair ★	$ 99.00	$ 79.00
Grammatik ★	$ 75.00	$ 69.00
Hyper Typer	$ 29.95	$ 26.00
Index ★	$ 99.00	$ 89.00
Milestone	$250.00	$199.00
Notebook	$150.00	$109.00
The Specialist, Medical Billing	$995.00	$750.00
Writer's Pak — includes all ★ products	$295.00	$250.00
EAGLE ENTERPRISES		
Citation	$185.00	$155.00
General Ledger	$395.00	$299.00
FINANCIAL PLANNING ASSOC		
Mini Model	$495.00	$398.00
Demo — with manual	$ 75.00	$ 60.00
FOX AND GELLER		
dGraph ★	$295.00	$225.00
dUtil ★	$ 99.00	$ 89.00
QuickCode ★	$295.00	$225.00
QuickScreen ★	$149.00	$129.00
QuickScreen CBasic	$149.00	$129.00
QuickScreen MBasic	$149.00	$129.00
All ★ products are dBase II enhancers		
FYI, INC.		
FYI 3000	$395.00	$295.00
SuperFile — now with Sort 'n Merge	$195.00	$145.00
INFOCOM		
Enchanter	$ 59.95	$ 55.00
Deadline	$ 59.95	$ 55.00
PlanetFall	$ 59.95	$ 55.00
Zork I, II, III each	$ 49.95	$ 47.00
KREPEC SOFTWARE		
ReportMaker	$130.00	$115.00
LEXISOFT		
SpellBinder	$495.00	$299.00
MICROSOFT		
Basic Compiler	$395.00	$299.00
MultiPlan	$195.00	$157.00
MICROSOLUTIONS		
Uniform Kaypro II Reads 31 machine formats	$ 69.95	$ 49.95
Uniform Kaypro IV & 10 Reads 54 machine formats	$ 69.95	$ 49.95

continued on next page —

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Product Description	List	Central
Kaypro Software – continued		
MICROSTUFF		
CrossTalk	$195.00	$149.00
MYCROFT LABS		
Compat	$ 99.00	$ 89.00
Mite	$150.00	$ 99.00
NORTHWESTERN ANALYTICAL		
StatPak	$495.00	$399.00
PEARLSOFT		
Personal Pearl	$295.00	$225.00
PLU PERFECT SYSTEMS		
Plu Perfect Writer CP/M 2.2E	$ 39.95	$ 37.00
Backgrounder	$ 45.00	$ 42.00
CP/M 2.2E only	$ 32.00	$ 30.00
QUIC-N-EASY PROD.		
Q-Pro-4 with multikey file indexing	$595.00	$395.00
SAN FRANCISCO COMP		
Power!	$169.00	$125.00
DocuPower!	$169.00	$125.00
SCIENTIFIC MARKETING		
MarketFax	$495.00	$359.00
SCREENPLAY SYSTEMS		
Scriptor	$295.00	$265.00
SOFTCRAFT		
Fancy Font	$180.00	$149.00
SOFTWARE RESEARCH TECH		
SmartKey II & SmartPrint II	$139.00	$ 79.00
DFastest — sorts dBase II files 60 times faster	$ 89.00	$ 79.00
SOFTWARE TOOLWORKS		
Airport	$ 19.95	$ 17.95
Computer Chef	$ 29.95	$ 27.00
Eliza	$ 24.94	$ 22.00
MyChess	$ 34.95	$ 29.95
Snake	$ 19.95	$ 17.95
Word Wiggle	$ 29.95	$ 27.00
What's for Dinner	$ 19.95	$ 17.95
SORCIM		
SuperCalc 2	$295.00	$235.00
STAR SYSTEMS		
The Accounting Partner	$395.00	$285.00
Legal Time and Billing	$995.00	$750.00
SUPERSORT		
Disk Doctor	$100.00	$ 75.00
T/MAKER COMPANY		
T/Maker III	$275.00	$199.00
T/Maker Intergrated with relational database manager	$495.00	$379.00
Hardware		
ADVENT PRODUCTS		
Anti-Glare Screen	$ 24.95	$ 21.95
5 Mhz Speed-Up Turbo Board	$ 99.95	$ 89.95
External Monitor Adaptor	$ 69.95	$ 59.95
ProGraphics	$299.95	$269.95
DATASOLVERS		
Internal 300 Baud Modem	$199.75	$187.00
Internal 1200 Baud Modem for Kaypro II, IV, 10	$427.50	$389.00
GAMMA RESEARCH		
DC/UPS	$469.00	$450.00
PANAMAX		
PowerMax — 250 Watt Battery Back-up	$559.00	$399.95
SWP MICROCOMPUTER PROD		
128k Co-Power-88 MSDOS	$400.00	$375.00
256k Co-Power-88 MSDOS	$500.00	$475.00
Supplies		
ComRex I and II	Prt Wheels	$ 24.95
Dysan SSDD Kaypro II disks	10/box	$ 29.95
Dysan DSDD IV & 10 disks	10/box	$ 39.95
Bookware		
Compleat Kaypro II, IV & 10	$ 16.95	$ 15.95
CP/M for the Kaypro with an Intro to dBase II	$ 16.95	$ 15.95
Wordstar and Friends	$ 21.95	$ 20.95
Free Software Handbook	$ 17.95	$ 16.95
Using CP/M on Kaypro 10	$ 19.50	$ 18.50

Free yellow Hi-Liter pen sent with every book order.
Prices, specifications, and offers subject to change without notice.

Do You Wish Writing Was Easier?

If you need to write, or want to write clearly, your Kaypro and the software program **Punctuation and Style** can help you get there faster. It improves, clarifies, and enriches your writing by identifying sentences with misused, redundant, faulty, cliched, or erroneous phrases, and shows you how to improve them. It helps you rewrite and check your work by quickly marking and annotating your files for easy correction. In addition to computer-fast identification of awkward, muddy, pompous, and wordy sentence structure, it also finds missing or improper punctuation, unbalanced quotes, wrong abbreviations, faulty capitalizations, and much more. *Punctuation and Style* actually improves your writing by mercilessly pointing out grammatical errors. After a few weeks with Oasis System's *Punctuation and Style* your writing is bound to become more dynamic, expressive, and honest. In time, you'll stop worrying about grammar and work on projecting ideas instead. After all, that's what writing is about.

Punctuation and Style makes writing and rewriting much easier. The list price of *Punctuation and Style* is $125. Central's price is $95. Experience the power of this valuable "Punctuation Checking and Writing Improvement Software" yourself. Order today to get this program fast.

Punctuation and Style works on files created with Wordstar or Perfect Writer. It comes with an easy to use, clearly written manual and is packaged in an attractive binder. Join thousands who now write with more confidence, faster, and better.

5 Star Money Manager

Chuck Atkinson's **Quick Check** software is a five star home and small business money manager that really works. It has three very important computer-friendly qualities: *Quick Check* is fast, accurate, and forgiving.

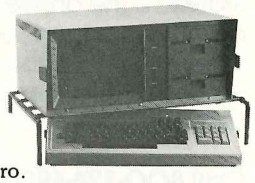
Quick Check can help you use your Kaypro to do practical work like drastically cutting down the time you spend paying monthly bills, reconciling your check book, collecting tax data, and managing your income. This program's ease of use, absence of tricky computer commands, and simple-but-accurate accounting procedures make it a pleasure to use. It is a superior money manager.

Quick Check makes family and small business bookkeeping simple. Single keystroke commands help you pay bills, keep track of deductible and non-deductible items, print checks, correct mistakes, make use of extensive on-screen help menus, and do much more. In short, *Quick Check* can help you keep track of all your income and expenses.

The list price of *Quick Check* is $95. Central's current price is **$79.** Use *Quick Check* and your Kaypro to keep important personal or business financial facts and figures at your fingertips. This fine software will save you years of frustration in the management of your money. Order today to get this time and money saving program fast. Guaranteed.

Attention: **Quick Check** is much easier to use than similar programs. 30-day trial and money back guarantee.

Perfect Kaypro® Stand



Simple, strong, sturdy, safe. These words describe an attractive, angled stand that provides a perfect spot to place your Kaypro. This stand is made from rounded, steel rods covered with a thick, shiny, soft, black polymer material that protects your Kaypro and table top from scratches. Unlike flat wood or acrylic panels used in other stands, the tough supporting rods of the Smart Stand (TM) do not obstruct air flow. In fact, since your Kaypro is lifted off the table top and gently angled by this stand, air rises up from under your computer, and flows freely through it to help keep it cool. When you're finished computing, you can slide the keyboard completely under the stand to create a working area on your desk. The Smart Stand is a super value at $34.95. Try it for 15 days. If not completely satisfied, send it back for a full refund. Matching 80 or 132 column printer stands are only $19.95 or $23.95. Order today to get the Smart Stand fast.

Cordura Travel Case

This full featured, padded carrying case is made from a super-material called "cordura." This material is rip, shred, and water resistant. The Coverman Kaypro case comes fully padded and lined, so your Kaypro is protected from unexpected bumps and jolts. Since your Kaypro is completely enclosed in this case, it keeps rain, sand, and other debris out of your machine. The Coverman case comes with external carrying handles, and a detachable, heavily padded shoulder strap, that comes in handy when you have to carry your Kaypro over a long distance. There is also a large interior pocket, perfect for transporting manuals and diskettes. The Coverman Kaypro carrying case is regularly $79.95. Central is proud to offer this expertly constructed case at $59.95. Please indicate your choice of color: silver-gray, dark blue, or brown. All straps and carrying handles are black. You must be completely satisfied with your purchase of this handsome travel case or receive a refund immediately. Order today.

CENTRAL COMPUTER PRODUCTS

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Dear Central,

Please send me the items listed below. I want fast, friendly service. Don't forget to include my free 12 foot extension cord. I understand there is no charge for this cord if I purchase 2 or more items from these 3 pages. My check, money order, or card no. is enclosed. Thanks.

Description	Price

Kaypro Model _____ Sub Total _____

CA Resident 6% Tax _____

FIRM MONEY BACK GUARANTEE ORDER WITH CONFIDENCE Postage & Handling $ 3.00

Total $ _____

☐ Navy blue ☐ Royal blue
☐ Send free catalog ☐ Send free 12 foot cord
☐ Check enclosed ☐ Money Order enclosed

☐ Visa/Mastercard # _____

Exp. Date _____ Sig. _____

Name _____

Address _____

City _____ State _____ Zip _____

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StatPac is convenient. Comprehensive. Inexpensive. Tested in the field for more than four years, StatPac has been updated, debugged and enhanced. So it's well established and easy to use. It even has built-in word processing for better file handling and editing.

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PUT IT ALL TOGETHER

This computer stand is also a printer stand. You can use half the desk space. Designed to be effective and attractive. Built of smoked acrylic to match your machine.

Custom Stands for other computers also available.

$95.95/with slot $103.95
Add $6.00 for shipping and handling
w 20" h 16" d 14"

Send Checks or Money Orders to:
Phone Orders: Master Card or Visa
D & LN Company
1780 Golden Gate Dr.
Pocatello, ID 83201
(208) 238-0785

what you can do with attributes:
-assign names to fields
-specify the types and range of characters that may be entered in a particular field (e.g. only numbers between 1 and 12 in a month field)
-refuse duplicate keys
-require certain fields be filled in
-request entries in certain fields be verified. (The optional verification process begins after you have completed the record before it is added to the datafile.)

DataStar also permits adding records in batches. The entry process is the same, but the records are stored in a temporary batch file and then verified together in one step. This enables you to check all the records entered in a particular work session before they are added to the datafile.

Writing reports with ReportStar

Useful as it is to retrieve records one at a time, it doesn't compare to what you can do with reports. A report, in this sense, can be anything from mailing labels to a price list. In each case, it contains information from a specified group of records in a datafile.

The more complicated the report, the more you have to know what you're doing.

The easiest way to produce a report is to use ReportStar's Quick Report generator (RGEN). Quick Reports are limited in design possibilities, but they *are* quick. It's simply a matter of specifying which fields from a given datafile you want to appear in the report. The whole process is menu-driven, and, once you get the hang of it, should only take minutes.

Suppose you want to know which customers owe you money. If the information is in the Customer Datafile, you can list it in a report designed with RGEN and printed out with REPORT (ReportStar's Print Report program). It would look something like the report in Figure 3 (see page 67). You could have selected other fields or rearranged their order, but the basic format—fields laid out in a row—would remain the same.

RGEN limits you to eight-character titles followed by "Report." That's because the title does double duty, serving as the prefix for the file containing the report specifications, i.e. ARREARS.RPT is the

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specification file for the Arrears Report. It uses the DataStar field names for column headings (If you didn't use field names, it uses the automatically assigned field numbers). When you run the report, you are prompted for the date.

RGEN also lets you choose between five kinds of summary calculations: record count, field totals, averages, maximum value, and minimum value. The Arrears Report (Figure 3) uses all five.

If you find RGEN's options too limiting, you can use REDIT, ReportStar's flexible report designer, to revise a Quick Report. The next example, a variation on the Arrears Report using fewer summaries (see Figure 4 on page 67), was first designed with RGEN. Then using REDIT, the title was changed (again, you would select the date when you ran the report), text was rearranged slightly, and a selection criterion picked out customers who owe more than $200.

You can also start from scratch with REDIT and design your own layout. REDIT's editing commands are similar to WordStar's, but designing a report is still trickier than editing a document. If you're a beginner, expect it to go slowly.

Updating with ReportStar

In our example of linked datafiles, the referencing was all one-way. An invoice pulled information from customer and product records. But an invoice also has information that affects the other records. For instance, it calculates a new balance due and records the sale of stock (which affects inventory levels). With DataStar the necessary updating must be done by hand, but with ReportStar's REDIT you can set up a report that will do the updating automatically.

Automatic updating is a good example of ReportStar's more sophisticated possibilities. It can generate reports that handle several datafiles and console input as well. These kinds of reports do more than produce print-outs. They take information from a variety of sources (a datafile or the console), perform calculations, and then send it all somewhere else (another datafile, the screen, the printer, or the disk).

To help set up a report like that, REDIT has two sets of prompts: one to define how datafiles will be used and another for individual report fields. All this is supposed to makes it easier for the non-programmer to use. And it does. But there's no way around it—the more complicated the report, the more you have to know what you're doing.

Index order and sorting

As you know, DataStar, unlike your fastidious file box keeper, does not store records in index order. With smaller files that's not a problem. But as a file gets larger, it takes DataStar longer to search for a record in a cluttered file. Having records in index order is often desirable for reports too. Since Quick Reports can only read records in datafile order, it's nice if the file is already sorted into index order.

DataStar has a File Maintenance procedure that cleans up a file and sorts records into index order. You can also use ReportStar's FORMSORT (it's the same program as SUPERSORT, distributed with the Kaypro 2).

You can start from scratch with REDIT and design your own layout.

FORMSORT (or SUPERSORT) has broader sorting capabilities. It can, in effect, create a new index for the datafile using a different set of keys and then resort the records into this new order. It's MicroPro's way to get around DataStar's limitation of one index per datafile. Suppose you wanted to resort your customer file by zip code in preparation for a mailing. First, you would make a copy of CUSTOMER.DEF and call it something like CUSTZIP.DEF. Next, using FORMGEN, you would change the key field in CUSTZIP.DEF to the zip code field. Then you would change the name of CUSTOMER.DTA to CUSTZIP.DTA. Finally, you would use FORMSORT to create the new index and resort CUSTZIP.DTA. It's a lot clumsier than dBASE II's multiple indexing capabilities, but it's workable.

In summary

DataStar comes with good training and reference manuals and is fairly easy to learn and use. Though it's no substitute for a full-fledged database management system—even with Report Star—it can meet the more modest record-keeping needs of many small businesses, particularly if you like to design your own setup. Best of all for Kaypro owners, the price is right. □

Joseph Comanda is a Philadelphia-based freelance writer and copy editor who specializes in short stories. He is a former political researcher for the Pacific Studies Center.

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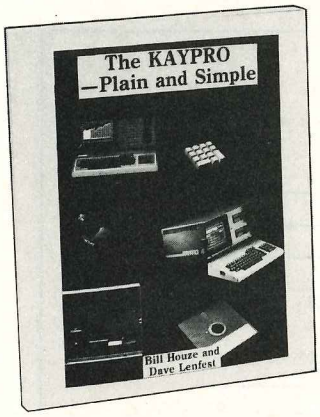

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CUSTOMER #: _____ FIRST NAME: _____
LAST NAME: _____
ADDRESS LINE 1: _____
ADDRESS LINE 2: _____
CITY: _____ STATE: __ ZIP: _____

PHONE: (___)___-_____ BALANCE DUE: $_____

Figure 1

INVOICE RECORD FORM

ORDER #: _____ DATE: __/__/__

CUSTOMER INFORMATION

CUSTOMER #: _____ FIRST NAME: _____
LAST NAME: _____
ADDRESS LINE 1: _____
ADDRESS LINE 2: _____
CITY: _____ STATE: __ ZIP: _____

PHONE: (___)___-_____

==========

ORDER

QUANTITY	CODE	PRODUCT	UNIT PRICE	TOTAL PRICE
_____	_____	_____	$_____	$_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

==========

SUBTOTAL: $_____
TAX: _____
TOTAL: _____
PREVIOUS BALANCE DUE: _____
CURRENT BALANCE DUE: _____

Figure 2

```
                    PRODUCT RECORD FORM

PRODUCT CODE: _____     PRODUCT NAME: _____________________

                  QUANTITY IN STOCK: _____

WHOLESALE PRICE: $_______              RETAIL PRICE: $_______
```

Figure 2 continued

```
                    ARREARS REPORT
                      12/31/84

     CUSTOMER NUMBER   LAST NAME          BALANCE DUE
     258               Williams             253.78
     274               Foster               173.47
     303               Larsen               205.73
     321               Barstow              103.76

Summary for REPORT (Count = 4):
 Total                                      736.74
 Average                                    184.18
 Maximum                                    253.78
 Minimum                                    103.76
```

Figure 3

```
          CUSTOMERS WITH LARGE BALANCES DUE AS OF 12/31/84

     CUSTOMER NUMBER   LAST NAME          BALANCE DUE
     258               Williams             253.78
     303               Larsen               205.73
     ================================================
     Total                                  459.51
```

Figure 4

An Overview of KAMAS

Integrated outline processor and more.

by Thomas Tucker

Do you wish you had a tool to deal with the mass (mess) of information you end up writing on napkins and matchbook covers? A method to integrate the jumble of facts, fiction, and ideas into the "big picture." Then you could analyze, add to, change, delete, and manipulate this information/data to your heart's content. Have you sighed that you should have bought an IBM compatible instead, so that you could use the powerful productivity tools you see advertised for it?

Enter KAMAS, a major new product for the Kaypro and other CP/M machines. It's an integrated software package, a rare beast in the CP/M world. Integrated packages consistently top the sales charts for 16 bit machines, but few are available for CP/M machines. KAMAS is integrated in that it provides the combined power of an Outline Processor, an Information Retrieval System (text database), Word Processing, a built-in remote BBS (bulletin board system), and a built-in language. Compusophic Systems has chosen to call it KAMAS (Knowledge And Mind Amplification System).

Outline processing

In the evolution of knowledge processing tools, outline processors are the newest development. Word processors manipulate text while outline processors manipulate ideas and concepts. It's difficult to appreciate what an outline processor can do until you actually use one. With a word processor, you have to juggle and relate scattered pieces of text and even different files while keeping the underlying theme clear in your head. An outline processor keeps you on top of things by organizing important concepts into a logical order and displaying a visual representation of the whole. Associated details can be entered as text under any keyword.

In operation, the most important KAMAS commands can be executed with single keystrokes. If you do get confused, over 100 online help screens are available. You start out by listing the main concepts of whatever you are working on. Don't worry about the order as you can change that any time. One idea will lead to another and soon you will have a structural representation of the complete project. You can elaborate any idea by filling it out with up to a page of text. This is an ideal program for brainstorming.

Peeling the KAMAS onion

KAMAS is a multi-leveled program. The first level or outer layer, Interactive Topic Environment, offers a text database manipulated through the outline processor. This includes the Information Retrieval System and the Word Processor and Rove mode. Most people's needs will be filled by using this level only. No programming is required.

The second level, Expanded Topic Environment, introduces a new prompt and adds the flexibility of a text interpreter. Text that you enter is interpreted and executed. At this level, Rove mode functions can be programmed to your requirements.

The third level, Programming Environment, introduces a structured programming language—with iterative and conditional control structures, macros, recursion, data types, and I/O. You can create your own commands to be added to this FORTH-like language. The inner layer of third level adds additional programming power. You gain the ability to create your own control and data structures.

Rove is an interactive command mode. Single keystrokes call up and execute various functions. At any prompt, you can just hit return and a help menu will present you with all options available for the command you are using. This technique is a good way to learn KAMAS quickly without reading the

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documentation. In fact, after spending about 15 minutes with the product, I went ahead and spent the next three hours organizing three business and my personal life into one outline and never once had to open the manuals!

Information retrieval

The information retrieval system enhances the power of the outline processor. It incorporates something called a "soundex algorithm" which will locate a keyword or string of characters even if misspelled. It will search through the detailed text as well as the keywords.

KAMAS is essentially a text database. The system is relatively fast in most situations. Any keyword in a topic file can be retrieved in about one second (more about topic files later). You can instruct it to search through additional topic files if your keyword isn't located in the current one. There is also a menu mode available in which each choice on a level is arranged on a menu. Simply enter the number of the choice you want to call up.

There are many ways to access the information in the outline. You can view the outline only, outline with text, text only, etc. You can focus on any part and see all the key ideas above it or view only the surrounding "neighborhood." The structure is not rigid. You can add to, delete, and reorganize the outline in almost any conceivable way.

Many word processor functions are available, such as left and right margin settings, justification, single, double, or triple spacing, block moves, and more. Control characters can be embedded in the text for special applications such as printer control. You can selectively output the information (with or without formatting) to a printer or file for later fine tuning with a word processor. Moving around the outline is easy. You can climb up or down item by item or level by level. The depth of KAMAS becomes apparent when you realize there are several ways to do most operations.

Topic files

The information entered in KAMAS is stored in special files called "topic files." The data is organized hierarchically like an outline or table of contents. Familiar terms are used to refer to items in a topic (e.g., level, parent, children, ancestors, and dependents). Any item in the outline is a stem. If the stem has items subordinate to it, then that stem becomes a branch. If an item has associated text, the text is stored in a leaf. Branches can contain any number of stems and each stem may have a leaf attached. Stems are made up of two elements—titles, and text leaves. Titles have two parts—a key and an optional subtitle. The key has a maximum length of 31 characters and the subtitle can be as long as 63 characters. A leaf will hold about one page of text. An overview is obtained by looking at the larger branches of the "tree." To see the details, examine each leaf individually. You can create different files for any subject. To access a topic make it the Build (active) topic. Up to 16 files can be mounted at once. SYSTOPIC is a topic file on KAMAS which gener ally needs to be on the disk for the system to work.

Word processing

KAMAS word processing is not the equal of a full-blown word processor. It lacks many powerful and useful commands. It's adequate, but if you use a word processor regularly, you will definitely miss some commands. The addition of a command to reformat paragraphs after moving or inserting text would be particularly nice. The command structure looks more like Perfect Writer, but due to popular demand, a way to configure it to look like Wordstar will be in a future newsletter. There are two built-in editors, one for the outline, and the other for text. Help is quickly available for either editor by typing "?." Text created with the KAMAS word processor can be output to standard CP/M files for use with other word processors.

Telecommunications

KAMAS includes a built-in terminal mode with X-ON/X-OFF protocol. It also has the ability to selectively capture (toggle) incoming data and write it to a standard CP/M file. The program as included is "bare bones," but enhancements (such as XMODEM protocol) will likely be included in forthcoming newsletters.

As a SYSOP who is constantly hounded by people wanting to set up bulletin board systems, I was very pleased to see a BBS feature built into KAMAS. The bulletin board lacks the ability to transfer files, but it does give remote callers access to the outline processor and message system. Designed to be used with a Hayes, or compatible smartmodem, it automatically adjusts the baud rate to either 300 or 1200 when answering. This makes it possible to set up the package as a remote information retrieval system right out of the box. For "those who can," complete source code is included as a model or it can be used as is. A KAMAS BBS in Oregon has a "No-frills BBS" program available for downloading that is entirely contained on one leaf! It would be nice if XMODEM protocol was included, allowing error-free transfers.

Not all KAMAS functions are available to callers for security reasons. Locked out are print commands, the ability to edit leaves with the screen editor (you can insert though), or create system files. A topic file called BBSMESSAGES is set up as the Build (active) topic. Other topic files can also be mounted and ready to access. Systopic already has a stem containing a welcome message (BBSWELCOME) and one containing help (BBSHELP). These can be edited to suit the application. You can keep callers out of the language environments by setting a software lock. This is advisable if the BBS is used publicly, otherwise it's possible for someone to damage the system, either intentionally or by accident. With some programming, remote systems can be customized for specific applications.

Support

When you send in your registration card, you will start receiving the KAMAS newsletter. You get 12 issues for free. The newsletter contains ideas, tips, and programs that you type in and run. Given the power of KAMAS, this could include spreadsheets, databases, and whatever the owner can devise.

Documentation

The documentation for KAMAS is excellent. It is clear, thorough, and unusually complete. It doesn't assume that the reader has a previous knowledge of outline processing or programming. Initial reactions to the documentation range from "WOW, I can't believe I get all this for $147," to "You mean I have to learn ALL THAT!?" A small booklet, "Introduction to Outline Processing," shows an example of an extended session with the outline processor. The complete documentation is contained in "User's Guide," volumes one and two. Each is about 300 pages long.

There is a wealth of information here even if you don't use KAMAS. Most chapters have examples. There is a list showing around 100 applications for KAMAS, with tips on how to use it to set up an appointment calendar, BBS, cardfile system, Decision Path Analysis, Indexes, Interactive Novel, etc. There are sections with suggestions on organizing

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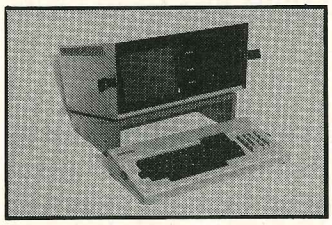

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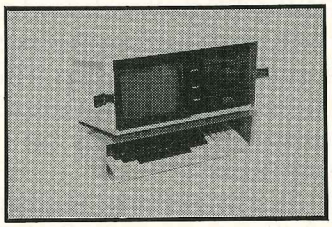

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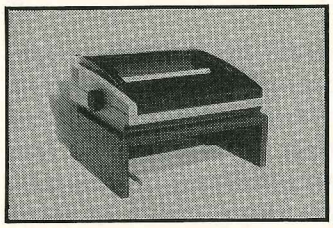

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information, creative thinking, knowledge processing, programming style and technique, and terminology. There is a complete index and glossary. The bibliography is classic with references to knowledge processing, philosophy, non-computerized hierarchical knowledge, and scientific readings. My only complaint is with the binding on the users guides which is wire-O. This is better than spiral but a long way from perfect binding. My volume one was falling apart within a week. Work of this quality deserves better. This effort shows how good documentation can be given enough thought and priority in a product.

It's hard to imagine getting "more program" for anywhere near the price.

KAMAS is available from Compusophic Systems,

Summary

It's hard to imagine getting "more program" for anywhere near the price of KAMAS. Considering the quality the program itself, the documentation, and newsletter, it has to be rated an outstanding value. KAMAS is suitable for writers, organizers, brainstormers, and developers of applications systems. Kudos to Adam Trent, programming, and Anne Hickman, documentation, for giving us an excellent product with an exciting future. □

Thomas Tucker is co-author of Hooking In: The Underground BBS Workbook and Guide. *He is also the organizer of the KAYLA Kaypro Users Group (which meets at SOS Computers in Los Angeles), and the sysop of the Computer Food Press Bulletin Board. In his spare time, he is a computer consultant to small businesses and a professional classical musician.*

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Reviewing Nevada COBOL

Speaking mainframe business on a micro.

by Steve T. Jones

The COBOL Programming language is like the diesel engine—its name is widely known but its inner workings are not. Like the diesel engine, it is most commonly associated with heavy-duty, industrial use. And just as the diesel has been introduced into economy cars, COBOL is available for personal computers.

Nevada COBOL is an inexpensive version which is available for the Kaypro and a variety of other CP/M-based computers. At $39.95 including postage, Nevada COBOL should be of interest to anyone who wants to learn more about this language. It may also appeal to experienced COBOL programmers who would like to use some of their professional skills on the home or office personal computer. First, some background.

What is COBOL?

COBOL was introduced in 1960; it is, by current standards, an ancient language. Back in the dark ages, programmers were working primarily with assembly languages and the predecessors to FORTRAN. These languages were machine-oriented, requiring programmers to concentrate more on the machine than on the problem to be solved.

COBOL gave the programmer the ability to write a program using English verbs (ADD, MULTIPLY) and simple IF..THEN..ELSE constructs. Further, the programmer was freed to use meaningful names for program variables, such as GROSS-PAY or FINAL-TOTAL-AMOUNT. COBOL also provided a comprehensive approach to defining the data that the program would process, allowing data items to be grouped into many levels. This permitted complex data structures to be created and manipulated in chunks or one piece at a time.

This combination of English-like syntax and extensive data definition features resulted in wide acceptance and vastly increased programmer productivity. I can recall one instance when I compiled a COBOL program and found that a single COBOL sentence had generated over 3,000 machine instructions. Without COBOL, that program would have been difficult and time-consuming to write. More likely, features that the user wanted would have been omitted.

In the data processing industry, there are now languages which produce programs which execute faster than COBOL programs; there are languages which are easier to learn or simpler to write and languages which are more flexible or more elegant in their structure. Yet COBOL remains the virtual standard for business data processing today. It is the language of choice for a majority of "industrial grade" business programming projects.

COBOL's continued popularity results from four factors. (1) COBOL programs tend to be long-lived, undergoing revisions and enhancements over the years. The costs of developing programs can then be spread over five or ten years. (2) COBOL programs are fairly "portable"—a change to a new computer does not necessarily mean the scrapping of all the old programs. (3) The concepts of "structured programming" have enabled programmers to write more lines of code in a single day and to write programs which are easier to maintain. (4) There are a lot of COBOL programmers.

Like virtually all languages used on medium-to-large-scale computers, COBOL is compiled. The program is written in the "source" language using a text editor of some kind. The COBOL compiler reads the source program and translates it into machine language. This machine language is then stored as a "loadable" program (the equivalent of a CP/M .COM file).

What's in Nevada COBOL?

Nevada COBOL was originally written for the PTDOS operating system which ran on the now-defunct Processor Technology microcomputer. It was re-written for CP/M and released in 1981.

An order for Nevada COBOL brings a diskette and a 165-page manual. The distribution diskette includes the COBOL compiler (CC.COM), a program called a "run-time loader" (RUN.COM), a program for listing the error

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messages generated by the compiler (ERRORS.COM), the COBOL source code for the terminal configuration program (CONFIG.CBL), a program for renumbering source programs, also in COBOL source code (RENUMBER.CBL), a program for converting Assembly-language subroutines for use in COBOL programs (CONVHEX.COM), and work files.

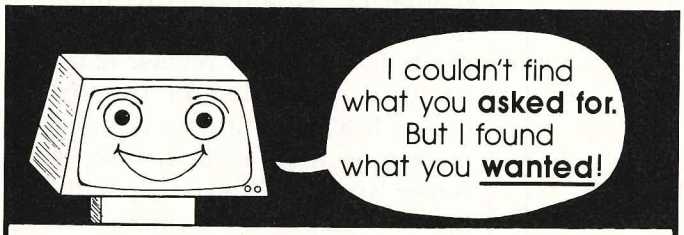
The manual is divided into nine sections. The first four correspond to the four divisions of a COBOL program (IDENTIFICATION, ENVIRONMENT, DATA, and PROCEDURE). Together, they make up the reference manual for the language. The other five sections contain definitions and other technical information about the language, the operational procedures for using the programs on the distribution diskette, a section on error messages, a brief comparison with "standard" COBOL, and a short primer on programming. The manual also includes 14 sample programs in COBOL source code, a problem reporting form, and an index.

An optional book, entitled *Nevada COBOL Applications Packages* is available for $9.95. Although the four programs included in the book are probably quite useful, I do not recommend its purchase. As Author Chuck Ellis freely admits, the programs are not structured. They set a terrible example for the novice and probably would not help the experienced COBOL programmer.

A preview of the manual

The manual is a paperback book measuring six inches by nine. Mostly free of typographical errors, it's generally clearly written. The first four sections, comprising the reference portion of the manual, are accurate and complete. The language syntax is described, but not really explained. This is not an unusual characteristic, however, because such manuals are generally not intended to be textbooks. Nevada COBOL's manual is no worse in this respect than most others.

The description of the operational procedures is clear and should get the user through compiling a program without any serious difficulties. The exception to this is a problem in the installation procedure. There is a discrepancy in the manual regarding the sequence of questions asked by the CONFIG pro-



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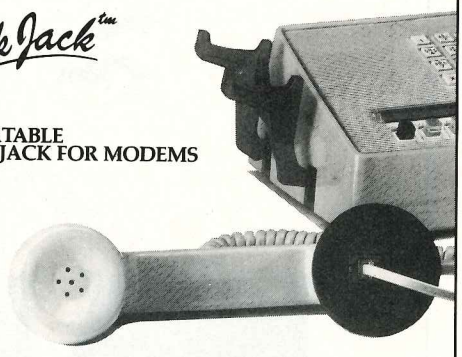

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gram. The following scenario produced correct results for my Kaypro II with an Epson MX-80 printer (my responses are in square brackets):

ENTER SCREEN
ENTER 2-DIGIT HEXADECIMAL CODE FOR DELETE-KEY [**7F**]
ENTER 2-DIGIT HEXADECIMAL CODE SENT TO BACKSPACE CURSOR [**08**]
IS THE BACKSPACE PRECEDED WITH AN ESCAPE CHARACTER (Y/N)? [**N**]
ENTER # OF CHARACTERS ACROSS SCREEN [**80**]
ENTER # OF LINES PER SCREEN PAGE [**24**]
DOES YOUR BIOS ISSUE A CR/LF AT THE END OF EACH LINE (Y/N)? [**Y**]
DOES YOUR PRINTER REQUIRE A LINE FEED (Y/N)? [**Y**] (Check your manual.)
DO YOU WANT TO USE THE CPM FUNCTION 1 & 2 CONSOLE I/O (Y/N)? [**N**]
DO YOU WANT TO USE THE CPM 2.X FUNCTION 6 CONSOLE I/O (Y/N)? [**Y**]
DO YOU WANT TO ACCEPT ANY HEX CHARACTER OR ONLY DISPLAY ASCII (H/A)? [**A**]
EOJ CONFIG RETURNING TO CPM

While these responses work for most applications, more technically-minded programmers may want to experiment with CP/M Functions 1 and 2 or with hex characters. (These parameters can also be altered by the program using the UNIT option on the DISPLAY statement.)

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Detecting bugs

The section which discusses error messages is the manual's worst feature. It describes the use of the error-listing program (ERRORS.COM) and outlines the structure of the file containing the text of the messages. The remainder of the section, however, contains only a listing of the messages as they are produced by the compiler or the run-time loader. No additional information is provided. For errors such as "LINE NUMBER OUT OF SEQUENCE," this is no problem. For others, however, it is a serious shortcoming. Some explanation of the probable causes of the error or a reference to another part of the manual would be helpful.

Like most compilers, Nevada COBOL produces a "SYNTAX ERROR" message with alarming regularity. Without further information, this error can be hard to track down. A new release of the package, scheduled for the first part of 1985, will provide approximately 50 more error messages. According to Ellis Computing, many of these will be expansions of the SYNTAX ERROR message. The new messages should make de-bugging easier.

From my own experience, I can suggest three tactics for locating elusive errors in the PROCEDURE DIVISION: (1) Look to the COBOL sentence (which might span many lines) immediately preceding the line number where the compiler reported the error. (2) Check the DATA DIVISION (both FILE and WORKING-STORAGE SECTIONS) where the data items you are referencing were defined. (3) Make certain that you have not exceeded COBOL's line length.

Basic information

The manual's "COBOL Primer" section is well-written and will be

helpful to beginners who need more information than the reference section provides. I also recommend it to experienced COBOL programmers who will need to know how Nevada differs from other versions of COBOL. At the end of this section, the manual forthrightly suggests the use of one of the many COBOL self-teaching books for further study—a suggestion which I endorse.

The sample programs at the back of the manual are also worth a look, and for the same reasons. The programs illustrate the use of fixed- and variable-length records, random and sequential access files, and the procedures for CALLing other COBOL and Assembly language programs. The beginner will benefit from seeing how the pieces fit together and the experienced programmer will be able to detect Nevada's differences quickly. The reader should note, however, that the programs are not representative of good programming style.

The compiler

Like most compilers, the Nevada COBOL version reads a source program and translates it into machine language. This machine code is then written to a file with an extent of ".OBJ" (see the discussion of the run-time loader below for an explanation of .OBJ files). As it encounters errors in the program, it places diagnostic messages in a work file. These error messages can then be retrieved by using the ERRORS command. The compiler is able to cope with perhaps eight or ten errors before it terminates—not unusual among compilers for microcomputers.

Like other COBOL compilers, Nevada permits some errors to go uncorrected. When such errors are detected, the message is identified as a "warning." "Fatal" errors will prevent production of the .OBJ file and must be corrected. This approach is far more forgiving than most language compilers.

Nevada COBOL does not produce a listing of the source program during compilation. This is a minor irritation, but the time saved by avoiding all the necessary write operations makes for a faster compile. The listing is not really necessary for de-bugging because error locations are identified by two line numbers.

Each error message includes both the line number from the source program and one which the compiler generates by counting lines as they are encountered. Still, it is a good idea to ensure that the source program lines are properly numbered. The RENUMBER program does this job and should be used any time lines have been added or deleted. (The RENUMBER program does not convert lower-case to upper when the file name is entered—use the CAPS LOCK key or, better yet, modify the program to do the conversion.)

The run-time loader

Unlike other compiler languages such as S-BASIC or Turbo Pascal, Nevada COBOL does not produce .COM files directly. Instead, the compiler produces program files with the .OBJ extent. The program called RUN.COM loads and executes .OBJ files. For example, to execute the RENUMBER program, the user would enter the command **RUN RENUMBER**.

RUN.COM contains the common routines for input/output,

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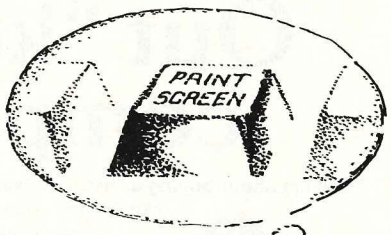

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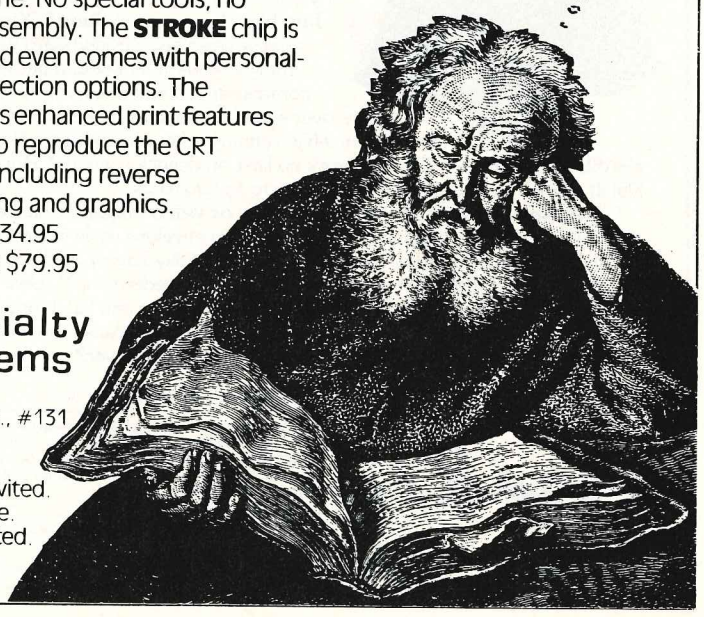

data format conversion and other standard routines which are required by most programs. Most other compilers "bind" these routines into the machine language program during compilation. According to Ellis Computing, their approach permits the storage of more programs on a single diskette by eliminating the duplication of these common routines in every user program. The penalty for saving this space is a slight delay while RUN.COM loads prior to the execution of the user program. With a large program, this delay should not be noticeable; with a small program, it will be.

System developers will be interested to know that RUN.COM can be distributed to third parties without any restrictions other than the inclusion of a copyright notice. This means that software written in Nevada COBOL can be marketed with RUN.COM included.

COBOL remains the virtual standard for business data processing today.

The assembly language converter

The CONVHEX command converts .HEX files produced by the CP/M Assembler to the format of .OBJ used by Nevada COBOL. This conversion makes it possible to write assembly language subroutines for use in COBOL programs.

Getting help

The manual includes a form for reporting problems and suggesting improvements to the compiler. A self-addressed stamped envelope is requested for replies. While using Nevada COBOL, I never had to contact Ellis Computing for assistance, so I cannot evaluate their response to programmers' questions. When I called to ask some questions for this review, however, they were quite helpful. I was told that they do not mind answering questions over the phone, though they are not equipped to handle a large volume of calls. In fact, many questions are difficult or impossible to answer without a listing of the program and other documentation. For this reason, many problems are best handled through the mail. Considering the low cost of Nevada COBOL, Ellis Computing's attitude is not unreasonable.

Nevada COBOL has spawned an independent users' group—the address is in the manual. The group serves primarily as a software exchange with several volumes of public domain software available. Membership is free.

Is this really COBOL?

Yes, although it is a limited version. Professional programmers will note that most of the data definition features are implemented, including COPY. OCCURS clauses (arrays) are limited to one level.

The PROCEDURE DIVISION statements include ADD (two items), SUBTRACT, MULTIPLY,

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DIVIDE, ALTER, CALL (another program), CANCEL (a called program), OPEN, CLOSE, READ, WRITE, REWRITE, ACCEPT (from keyboard only), DISPLAY (on screen only), EXIT, GO TO, IF (with some limitations), INSPECT, MOVE, PERFORM (no VARYING option), STOP. The PROCEDURE DIVISION must end with an END statement — omitting it will cause an error.

Some of the features which aren't here include descending keys, COMPUTE, Report Writer, SEARCH, and SORT. About half of the ANSI-74 reserved words are implemented in Nevada COBOL. What is most important, however, is that the features which are implemented produce "COBOL-like" results.

Conclusions

I have not included formal benchmark tests because COBOL does not compete on the basis of speed. The appeal of COBOL has little to do with time; it has to do with the language itself. COBOL's stature in the data processing industry creates an interest of its own.

I did run some comparisons with S-BASIC and Turbo Pascal. These showed Nevada COBOL programs to be roughly comparable to S-BASIC programs in execution speed. Turbo Pascal produced faster programs. The Nevada COBOL compiler seems to be a little faster than S-BASIC's. Turbo Pascal's compiler was much faster, although it always stops at the first error. As long as it is not used for applications which require high-speed interactions between user and program, Nevada's speed is quite adequate.

Nevada COBOL is a good product at a very reasonable price. I would expect the following groups to find it useful:

- Students who need to learn COBOL. Nevada provides the basics; it should not be necessary to un-learn anything. Using another COBOL compiler should be a question of moving on to bigger and better things, not starting over.
- The professional programmers who use COBOL regularly and are aware of Nevada's limitations. Experienced programmers will also miss the map and cross-reference compiler options standard with mini and mainframe compilers.

Software written in Nevada COBOL can be marketed with RUN.COM included.

- Hobbyists with an interest in COBOL.
- Managers who would like to converse on a little more equal footing with the people from Data Processing.

Nevada COBOL is not perfect, but it is an outstanding value. □

Steve Jones is a data processing teacher at East Central College in Union, Missouri.

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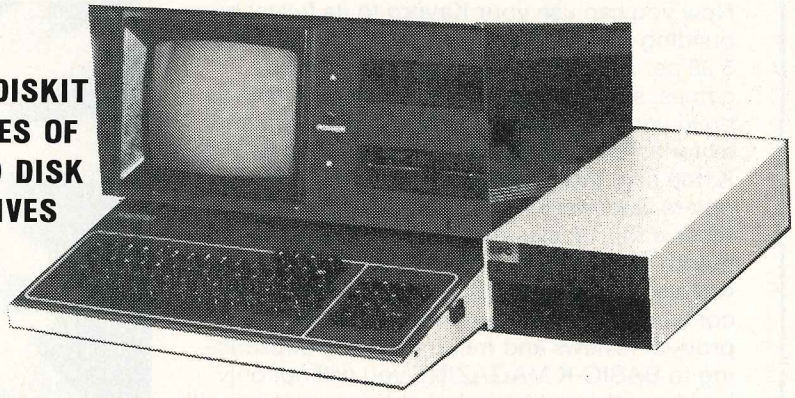

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(continued from page 18)

causes SWEEP to ask you if you want to erase all tagged files, or all untagged files. If you hit T or t, tagged files will be erased. If you hit anything else, by mistake or otherwise, SWEEP will quickly erase all the untagged files. *(Rand's version 2.02 asks if you want to prompted Yes or No on any tagged or wildcard erasures.— TE.)*

The later version of the program (see Listing 2) adds several useful capabilities, though it appears not to give the option of verification of file transfers, and has no option allowing a sweep of all user numbers.

The added capabilities are finding files, printing them, a time-saving wildcard tag (tag all *.DOC files, for example, as in the listing), setting file status (R/O, SYS), and squeezing or unsqueezing files. Squeezed files take up less disk space and less modem-to-modem transfer time, but they have to be unsqueezed to be used. (SQ and USQ, separate squeeze/unsqueeze utilities, will be covered in a future column.)

Both versions allow a system of mass renaming—which is handy when you're archiving a project and want to shorten file names to allow insertion of "as of" date. For example, files answering to the ambiguous specification KAYP????.* can be renamed K????V12.NOV, with the characters corresponding to the question marks being "passed through" to the new filenames. Thus KAYPNEWS.TXT would become KNEWSV12.NOV and KAYPCOST.CAL would become KCOSTV12.NOV. You have to experiment to learn sure-footed use of this feature, but once you do it's valuable for preserving an audit trail of your projects.

SWEEP is activated by simply typing its name, followed by a carriage return, as with all COM programs. If you wish, you can add a file specification to limit the number of files you'll consider. For example, **SWEEP B:????LAST.LTR *** tells the Fisher version that you want to look at all files on drive B whose filenames have four characters followed by LAST, with the file type LTR. The asterisk tells it you want to deal with all user areas, or if you use a number in that position, only that user number will be displayed. The Rand version deals only with files under the current user number.

Where to get it: Versions of

continued on page 80

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A15)B:SWEEP B:SWEEP C:*.DO*

0 NSWEEP   -  Version 2.06     04/20/1984
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Drive C15:????????.DO?    74K in    9 files.   212K free.
   1. C15:BACKUP  .DOK    8K : ?0 NSWEEP   -  Version 2.06     04/20/1984
    (c) Dave Rand, 1983, 1984
            Edmonton, Alberta


A - Retag files          ¦ Q - Squeeze/Unsqueeze tagged files
B - Back one file        ¦ R - Rename file(s)
C - Copy file            ¦ S - Check remaining space
D - Delete file          ¦ T - Tag file for transfer
E - Erase T/U files      ¦ U - Untag file
F - Find file            ¦ V - View file
L - Log new disk/user    ¦ W - Wildcard tag of files
M - Mass file copy       ¦ Y - Set file status.
P - Print file           ¦ ? - Display this help
X - Exit to CP/M         ¦ cr, sp - Forward one file

  74K in    9 files.   212K free.
  Tagged files =    0K (   0K).

   1. C15:BACKUP  .DOK    8K : T  Tagged files =    8K (   7K).
   2. C15:BIGBURST.DOK    4K : T  Tagged files =   12K (  10K).
   3. C15:CRC     .DOC    2K :
   4. C15:FLOPCOPY.DOK    2K :
   5. C15:HEXDUMP .DOC    2K :
   6. C15:HEXDUMP .DOK    2K : T  Tagged files =   14K (  11K).
   7. C15:MODEM7  .DOC   38K : T  Tagged files =   52K (  49K).
   8. C15:MULTCOPY.DOC    2K : T  Tagged files =   54K (  50K).
   9. C15:SWEEP38 .DOC   14K :

   1. C15:BACKUP  .DOK    8K :*E
Erase Tagged or Untagged files (T/U)? T
Do you wish to be prompted (Y/N/A)? N
Deleting  ---) C15:BACKUP  .DOK
Deleting  ---) C15:BIGBURST.DOK
Deleting  ---) C15:HEXDUMP .DOK
Deleting  ---) C15:MODEM7  .DOC
Deleting  ---) C15:MULTCOPY.DOC
   1. C15:CRC     .DOC    2K : W  Tag what? *.DOC

Tagging --) C15:CRC     .DOC    2K (   1K).
Tagging --) C15:HEXDUMP .DOC    4K (   2K).
Tagging --) C15:SWEEP38 .DOC   18K (  16K).
   1. C15:CRC     .DOC    2K :*M
  Copy to drive/user? A15
Copying   --) C15:CRC     .DOC to A15:
Copying   --) C15:HEXDUMP .DOC to A15:
Copying   --) C15:SWEEP38 .DOC to A15:
```

Listing 2

SWEEP are available from many software exchange bulletin boards, from Micro Cornucopia, PO Box 223, Bend OR 97709, and from most Kaypro Users Groups, including The Tampa Bay Kaypro Users Group (TBKUG), 14 Cypress Drive, Palm Harbor FL 33563 (include a self-addressed stamped envelope when requesting information).

Either of these versions are well worth trying as an addition to your Kaypro's arsenal of utilities; especially since they're essentially free. □

Dick Lutz welcomes nominations of public domain programs for review here. Address him at 3150 NE 36 Avenue #249, Ocala FL 32671. Include information on where the program is available and, if possible, a Kaypro formatted disk, preferably double-sided.

OOPS

(continued from page 53)

```
2819 45 20
281A 4C 20
281B 53 20
281C 54 20
281D 41 20
281E 52 20
281F 4F 43
2820 56 4F
2821 52 4D
2822 00 .   (Yes, it's a period.)
-G0
```

The "GØ" will cause a Warm Boot and return you to the A> prompt. Kaypro 10 owner's should enter **SAVE 136 WSOVLY1.OVR** and press RETURN. Kaypro 4 owners—enter **SAVE B:WSOVLY1.OVR** and press RETURN.

This completes modifications to WSOVLY1.OVR. The only remaining detail is to change the OPENING MENU or NO FILE MENU to say "Run The Word +" rather than "Run SpellStar."

To do this we must make some changes to WSMSGS.OVR. The same procedure used in the previous patches will be followed here. That means that Kaypro 4 owners should have a CP/M diskette in drive A and a WordStar working diskette in drive B. (Kaypro 10 owners still don't care.) Start DDT with the command **DDT WSMSGS.OVR** if you have a Kaypro 10; Kaypro 4 users, enter the command **DDT B:WSMSGS.OVR**. Remember, only the parts in boldface are entries you need to make.

WordStar 3.3 owners:

```
DDT VERS 2.2
NEXT PC
7680 0100
-S06F0
06F0 53 54
06F1 70 68
06F2 65 65
06F3 6C 20
06F4 6C 57
06F5 53 6F
06F6 74 72
06F7 61 64
06F8 72 20
06F9 20 2B
06FA 20 .
-G0
```

WordStar 3.0 owners:

```
DDT VERS 2.2
NEXT PC
6580 0100
-S06EF
06EF 53 54
06F0 70 68
06F1 65 65
06F2 6C 20
06F3 6C 57
06F4 20 6F
06F5 53 72
06F6 74 64
06F7 61 20
06F8 72 2B
06F9 20 .
-G0
```

Again, the "GØ" causes a Warm Boot and returns you back to the A> prompt. Kaypro 10 owners should enter **SAVE 136 WSOVLY1.OVR** and press RETURN; Kaypro 4 users, enter **SAVE B:WSOVLY1.OVR** and press RETURN.

Modifications are now complete. □

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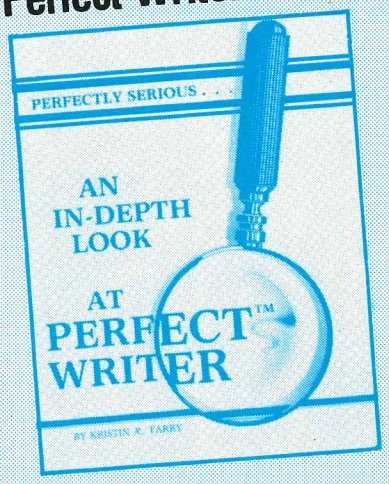

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Technical Forum

by Tom Enright

Lately I have a lot of readers asking how they can access the internal modem on Kaypro's '84 series machines. Any Kaypro that came with the internal modem should also have included "SuprTerm." By the time this article is in print, Kaypro Corporation should have switched over to MITE as its bundled communications package. You may have noticed the advertisement for MITE on page 73 of the September issue. In that ad, Mycroft Labs offers to upgrade any SuprTerm owner with the latest version of MITE for $22.50. This offer was agreed on by Mycroft Labs and Kaypro Corporation as the method of upgrading prior owners of SuprTerm to the latest software.

Kaypro is under no obligation, moral or otherwise, to upgrade prior owners for free on anything. They have chosen to arrange for this low-cost upgrade as a service to Kaypro owners. We all know that SuprTerm had a couple of surprising "features," and this may have influenced the decision.

While Kaypro has received its share of criticism, their attitude towards upgrading past customers deserves some praise. I happen to agree with Ezra Shapiro's infamous "Unhealthy Attitudes" article (September/October 1983). This article discusses user complaints, and the amount of "handholding" a user should reasonably expect from a manufacturer. The microcomputer industry, as a whole, gives its customer base more support than any other industry ever has. Nuff said. In any case, any owner of a Kaypro Computer who also has SuprTerm, can get one of the best communications packages on the market for a ridiculously low price.

Using the Kaypro's internal modem without a software interface is flat impossible. The internal modem on the '84 series machines is integrated into the design of the main board. You can't talk to it by simply sending command strings out a serial port. That would work fine with an external modem attached to one of the serial ports on the back panel; at least it would work if both serial ports were supported by the operating system. Unfortunately, only the "Serial Printer" port is supported by the operating system on Kaypro 10 or '84 series computers. (A new Interrupt Driven ROM-BIOS is in the works to remedy the situa-

(continued on page 84)

I/O PORT ADDRESSES

Use	Port#	Device
Keyboard:		
	05	ZSIO 1 Chan. B
	07	ZSIO 1 Chan. B
Video:		
	1C	6545/6845 EA
	1D	6545/6845 EA
Parallel Printer: (Output only)		
	18 - 1B	74 373
Serial Printer I/O:		
	08 - 0B	WD 1943 COM 8116
	0C	ZSIO 2 Chan. A
	0E	ZSIO 2 Chan. A
Serial Data I/O:		
	00 - 03	WD 1943 COM 8116
	04	ZSIO 1 Chan. A
	06	ZSIO 1 Chan. A

Function
Keyboard data (R/W). Eight-bit data from keyboard.
Keyboard Control/Status I/O.
CRT controller status/control I/O.
CRT controller data I/O.
Parallel printer port (Write only).
Baud rate for serial printer port.
Serial Printer Data I/O (RS-232C).
Serial Printer Control/Status I/O.
Baud rate for Serial Data Port (write only).
Serial data port (RS-232C). Data I/O.
Serial data port (RS-232C). Status/Control I/O.

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tion, but it's not ready yet.) This leaves us with using direct port I/O statements to access either the internal modem or the serial port, also labeled modem on some models. Not the most convenient of situations, but we'll have to live with it for now.

The most I can do for those of you who still want to give it a try is to publish the port addresses for the '84 series boards and the Kaypro 10. Given these addresses, and data sheets on the chips in question, a good programmer can write the driver routines. You're on your own as far as obtaining the data sheets for the chips. If you have enough skill to do the programming, you probably already have a source for the specification sheets. Please don't ask Kaypro or *PROFILES* to sell, or give, them to you. Neither Kaypro, nor this magazine, is prepared to stock enough of them to do that. With that little statement out of the way, on to the port addresses. □

Use	Port#	Device	Function
Real-time clock:		(NS-MM58167A)	
	20	PIO Chan. A data.	Real-time clock register select and interrupt status.
		Bit functions:	
		0 lsb register select (output). 1 " 2 " 3 " 4 msb register select (output). 5 not used 6 rtc interrupt output (input). 7 rtc not standby interrupt output (input).	
	22	PIO Chan. A	Real-time clock PIO control port.
	24	MM 58167A	Real-time clock data I/O.
System:			
	14 - 17	74 373	System output port.
		Bit functions:	
		0 0=Select floppy A (C on K10). 1 0=Select floppy B (HD on K10). 2 0=Select side 2. 3 PSTROB. 4 0=Floppy motor on (48 tpi drives). 1=Select high speed (High density drive). * see note 5 0=Select double density. 6 0=Select normal character set. 7 0=Select 64K RAM. 1=Select ROM (RAM 8000-FFFF).	
		74 244	System input port.
		Bit functions.	
		0 0=floppy A selected (C on K10). 1 0=floppy B selected (HD on K10). 2 0=Side 2 selected. 3 PSTROB. 4 0=motor is on (48 tpi floppy). 5 0=Double density is selected. 6 0=Parallel printer is busy. 7 0=64K RAM is selected. 1=ROM (RAM 8000-FFFF) selected.	

Use	Port#	Device
Internal Modem:		
	0D	ZSIO 2 Chan. B
	0F	ZSIO 2 Chan. B
	21	PIO Chan. B
	23	PIO Chan. B
Disk Controller Ports:		
	10	1793
	11	1793
	12	1793
	13	1793
	80	WD 1002
	81	

```
                    Function

      Internal modem data I/O port.

      Internal modem status/control
      I/O port.

      Internal modem control lines.

 Bit functions.

 0 lsb digit to dial (output).
 1                    "
 2                    "
 3 msb digit to dial (output).
 4 0=touch tone.
   1=pulse dial.
   -ate on modem chip.
 5 0=not loop back (test mode).
 6 0=off hook (on line).
 7 1=digit present to dialer chip, not
   BSTROBE input present next digit
   from dialer chip.

          Modem PIO control port.

    The internal modem on the KAYPRO
uses Texas Instruments TMS99531 dialer
and TMS99532 modem chips.  Both of these
chips are accessed through the Z80 PIO
and Z80 SIO chips.  Specification sheets
on these chips are available from Texas
Instruments and ZILOG respectively.

   Floppy disk controller
   status/command I/O port.

   Floppy disk controller
   track register I/O port.

   Floppy disk controller
   sector register I/O port.

   Floppy disk controller
   data register I/O port.

   Hard disk controller card data
   I/O port.

   Error Register (input).
   Write Precomp. (output).
```

(continued)

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Use	Port#	Device	Function
	82		Sector count register I/O.
	83		Sector number register I/O.
	84		Cylinder low register I/O.
	85		Cylinder high register I/O.
	86		Size/drive/head register I/O.
	87		Status register for input. Command register for output.

* Note on High density drives:

A 1 in bit position 4 will select high speed on the high density diskette drive. To reset the drive to low speed it is necessary to change this bit to a Ø AND open the drive door, then close it.

** Extra Header Lines **

Use	Port#	Device	Function
Use	Port#	Device	Function
Use	Port#	Device	Function
Use	Port#	Device	Function

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New Products

by Susan Hyman

The following new product listings are not reviews, and should not be considered as tested endorsements. We have looked at some of the products, but we do not necessarily have hands-on experience with them.

To be considered for publication in new products, please send press releases and product information to: New Products Editor, PROFILES Magazine, Kaypro Corporation, P.O. Box N, Del Mar, CA 92014. Send 8" X 10" black and white glossy photos if available.

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WEN costs $6 per hour for non-office hours, weekends and holidays, and $16 per hour on weekdays. Signup fees are $29.95 and $49.95. No extra charge for 1200 baud.

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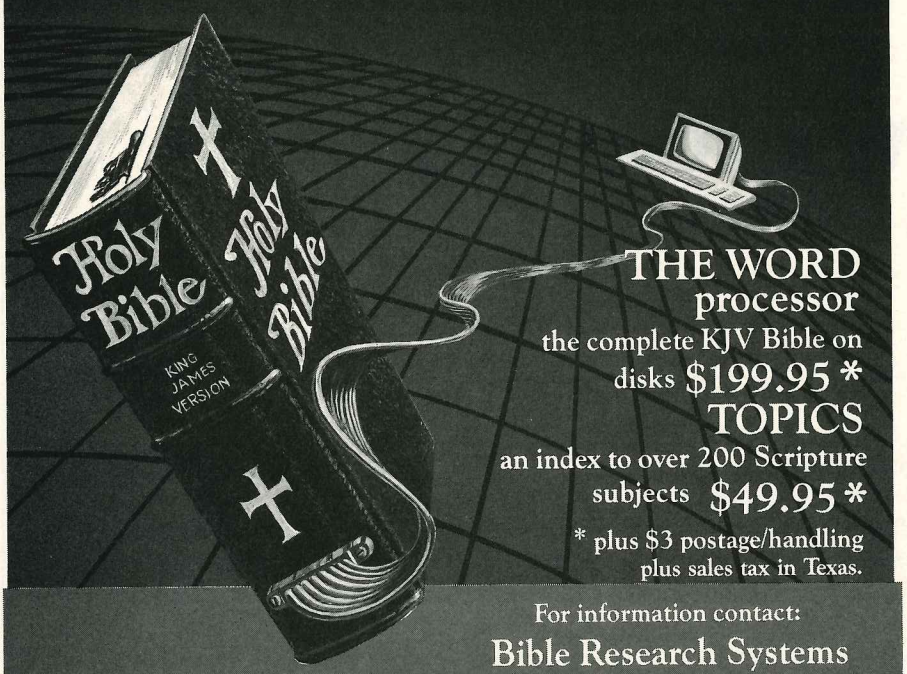

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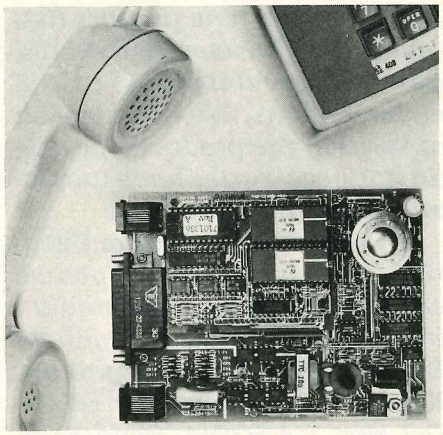
With this capability, having to dial again to speak on the line after sending data isn't necessary. You can also use it to do call progress monitoring and detection for dial tones, busy signals, remote ringing, voice, data, and even current disconnect.

This POPCOM unit can be installed on the wall, desk or floor. It is also adjustment free (no switches or indicators).



$475. Prentice Corporation, P.O. Box 3544, Sunnyvale, CA 94088 (408) 734-9810.

Disk format conversion service. Compu-Draw can transfer files across most CP/M-80, CP/M-86, and PC-DOS disk formats. This process lets those with files in one format transport them to computers using a different format. The company can also transfer files between these disk formats and 9-track tape used on mainframes.

The cost is $4 to $8 per input and output disk. There are no separate downloading charges, and Compu-Draw will provide the destination disks if required.

Compu-Draw, 1227 Goler House, Rochester, NY 14620 (716) 454-3188.

Switch/spooler. The Kearsarge SX-60 Multi-Channel Switch/Spooler serves up to four computers and feeds two printers simul-

taneously, ending the hassle of switch boxes and waiting for printers to finish their tasks.

Any of the four input computers can direct its output to either of the printers, and all switching is under software control. Spooler buffer sizes of 8, 32, or 64K store from 2-1/2 to 20 pages of single-spaced text.

$469. Kearsarge Industries, Inc., 12310 Pinecrest Road, Reston, VA 22091 (703) 620-5760.

Communications software. TERM is a smart terminal and file transfer program which lets you exchange binary or text files over phone lines at speeds up to 9600 baud.

It has automatic error-checking and retransmission, plus dumb terminal emulation for remote systems.

$150. Century Software, 9558 South Pinedale Circle, Sandy, UT 84092 (801) 943-8386.

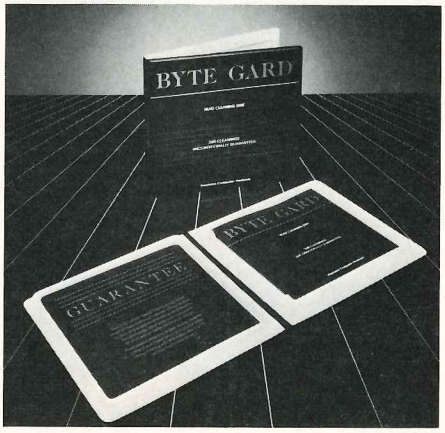
Sales management package. SALE TRACK™ allows both sales managers and representatives the opportunity to record and store all important information concerning clients and prospects.

Names can be retrieved by such fields as address, contact name, and year-to-date sales. The SALE TRACK package also includes programs to manage expense accounts and generate quotations.

The program works with WordStar and MailMerge to create mailing lists and sales letters. Separate passwords allow the sales manager to survey the activity of sales people.

$495. KNE Resources, 546 Crossen Ave., Elk Grove, IL 60007 (312) 228-5850.

Floppy drive cleaning disk. Byte Guard guarantees their kit for 260 cleanings or one year (five working days a week). This product removes dirt, dust and oxide deposits from floppy read/write heads to prevent disk errors and data losses. The user simply inserts the cleaning disk in the drive; no alcohols or other fluids are needed.



$39.95. Precision Computer Products, 770 Welch Rd., Palo Alto, CA 94304 (800) 321-2804 or in CA, call collect (415) 324-1024.

Information retrieval and database program. Searching for and keeping track of files on floppy disks is now easier with SuperFile. You can also use this software to create a free-form database.

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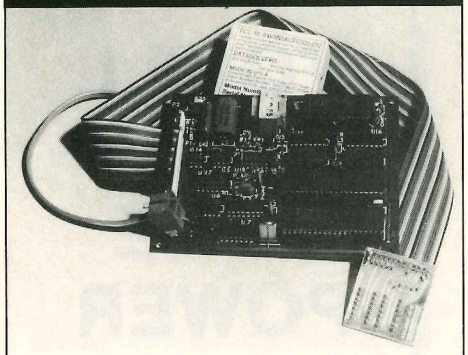

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440 Maple, Wichita, Ks. 67213

Sort 'n Merge, sorts alphabetically or numerically, merges and splits disk files, changes characters within files, and does selective or mass renaming of files.

$195. Software Marketing Associates, 4615 W. Bee Caves Rd., Austin, TX 78746 (512) 327-2882.

Printer table. This piece of computer furniture has a walnut woodgrain safety-banded plastic top with a black textured 27" high frame. It's designed to

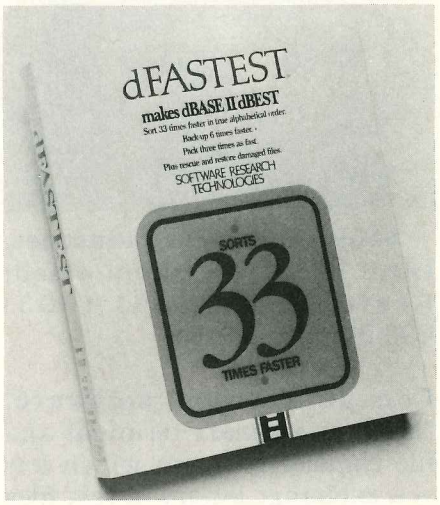
accommodate any model printer. Paper rack and casters are available as options.

$58.90. Royal Seating Corp., P.O. Box 753, Cameron, TX 76520 (817) 697-6421.

Software security demonstration package. SoftGuard Software Piracy Prevention Demonstration Package prevents unauthorized use of data by placing an imprint or other value on a disk. A disk imprint is a signature or fingerprint on the disk that cannot be easily changed or counterfeited. Since the application package is enciphered on the disk, reverse engineering of the protected program is next to impossible. To increase the security level, the routine that validates the disk is also enciphered to prevent piracy by disassembly and change of the validation routine.

$25.00 for the demo. Advanced Computer Security Concepts, 4609 Logsdon Dr., Annandale, VA 22003 (703) 354-0985.

Utility program for dBASE II. dFASTEST sorts up to 32 II fields, or parts of any field, 33 times



quicker than does dBASE II itself. It accomplishes this, and other tasks all without leaving dBASE II.

dFASTEST rescues bad data files, copies files onto another disk, and packs dBASE II data files. Also, you can use this program to bypass dBASE II's index command to print reports and labels up to ten times faster.

$89.95. Software Research Technologies, Inc., 3757 Wilshire Blvd. Suite 211, Los Angeles, CA 90010 (213) 384-5430.

Text file indexer. Boilerplate is a program that stores text files in a tree-structured index system, which the user sets up.

All documents, forms, letters, and paragraphs are stored in one file, so you don't use up directory space. You can use up to 20 characters to name them. These

entries are then compressed so they take up as little as 1/8K of space, and can be retrieved for editing at any time without affecting the stored document.

$195. TSK, Inc., P.O. Box 2166, Minot, ND 58702 (701) 838-3546.

Journal for microcomputing genealogists. A bimonthly publication, *Micro-ROOTS*, is now available for those curious about their family roots and history, as well as for the serious genealogist. The newsletter/journal is written for microcomputer users at any level, operating any type of machine.

The publication will include articles on getting started with your family roots, genealogical software reviews, user group activities, reviews of genealogical self-help books, a calendar of Genealogical Society events, and more.

$24.95/year. Micro-ROOTS, 14208 Weeping Willow Dr. Suite 32, Wheaton, MD 20906 (301) 460-0754.

Multi-user BASIC. Keyed data files, decimal arithmetic, and fully formatted data entry screens are principal features of DeltaBASIC. With file and record locking, the program supports single- or multi-user micro systems.

Among useful features designed to speed and improve the development of applications programs is a FORM statement which offers a wide range of choices in data presentation and storage. DeltaBASIC also offers a powerful substring function which not only allows access to any part of the string, but also allows insertion and deletion of characters within strings. Source language is 8080 assembly.

$350. DeltaSoft, Inc., 7524 S. Broadway, Tyler, TX 75703 (214) 581-1425.

Engineering/troubleshooting aids. The Omni 4 integrates a logic analyzer capable of timing, state, and signature analysis with the Kaypro so that a user with minimum technical knowledge can monitor the internal functioning of computers and other digital machinery.

This setup provides large and small businesses with the ability to develop and service their own computer systems and software. The Omni 4 has menu-driven operation, 70+ pages of "help" information, and an automatic self check of internal circuitry so the user can concentrate on the problem [at hand], not the analyzer itself.

$4495. OmniLogic, Inc., 350 Sunset Blvd. N., Renton, WA 98055 (800) 228-OMNI or in Washington state: (206) 271-2000. □

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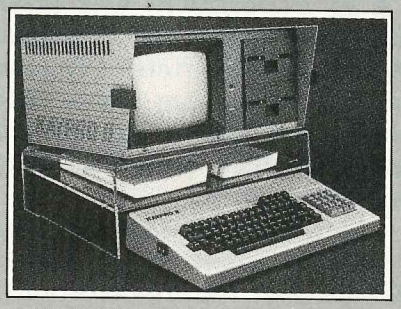

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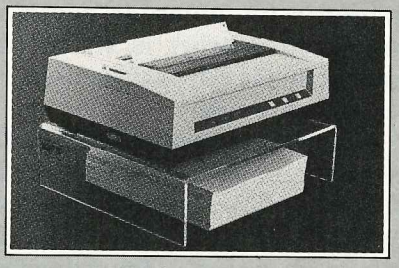

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Users' Groups

by Edwin and Victor Van Ravenswood

A Kaypro Users Group Department was established at the European Kaypro headquarters in January of 1984. This was just a short time after Kaypro opened this overseas office, located in Nuth, the Netherlands.

The goals of the KUG in Europe resemble those in the United States, but its organization is completely different. Getting started was complicated, mainly because the European market is not exactly the same as the U.S. market. Kaypro owners in Europe aren't as inclined as their American counterparts to use the machine for home or personal use; their market is small and medium-sized companies or technical people.

The distribution of *PROFILES* is also completely different. To prevent problems with Customs duties and all of the different monetary systems, the magazine is distributed only through the European KUGs. Though somewhat tricky, the magazine's distribution is very important to European users—they use it like everyone else does—to learn about their Kaypro and to solve problems.

Dutch users

KUG groups have been formed throughout most of Europe. The Netherlands KUG alone has an active membership of over 300 people and is well supported by Kaypro Europe. The secretary of the Dutch group distributes *PROFILES* to its members. Their subscription to the magazine is included in the cost of their KUG membership. A mailing system has been established by this group which uses modems to distribute much of the American public domain software.

Germany

West Germany has a much different arrangement. The KUG had to be legally registered with the government. Each member pays the equivalent of $40 for dues and receives a membership card. The card entitles them to a *PROFILES* subscription and allows them to buy American public domain software for handling expenses. The translations are done by one of the group's software engineers. The KUG was founded in Hannover during the April Computer Fair, 1984. Kaypro President, Andrew Kay, was present for the opening and was nominated Honorary President—an honor he gladly accepted.

France

France had already started the KUG ball on its own. However, Kaypro Europe KUG Support helped to establish a larger, national group. Then, an international initiative was begun in April of 1984 to get groups started not only in France, but in Austria, Switzerland and Belgium as well. A meeting was held in Paris for this purpose, hosted by Peggy Lloyd of K-West, Costa Mesa, California.

And elsewhere

Groups are being organized in the Scandinavian countries and there is a large KUG in Tel Aviv, Israel. Efforts are being made to establish KUGs in the rest of Europe too. These European groups have expressed an interest in getting in touch with their American cousins. If any U.S. KUGs are interested, contact the KUG Support Department at Kaypro's European headquarters. The person to contact is Marie Therese Cillekens, at Kaypro Europe, Stationstraat 7, 6361 BH-Nuth, The Netherlands. Existing KUGs in Europe:

KUG Netherlands
P.O. Box 21
1740 AA Schagen
The Netherlands
Attn: Jaap de Buijser

Kaypro-Club Deutschland
Buro Klempp
Brandauer Weg 11
6101 Modautal 2
West Germany
Attn: Heiner Klempp

KUG Belgium, Dutch
P.O. Box 7
Molenbeek 6
Belgium
Attn: Charles de Grave

KUG Belgium, French
Steenweg op Ninove 987
1080 Brussel
Belgium
Attn: Charles de Grave

KUG France
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5, Quai du Roethig
67200 Strasbourg
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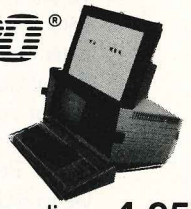

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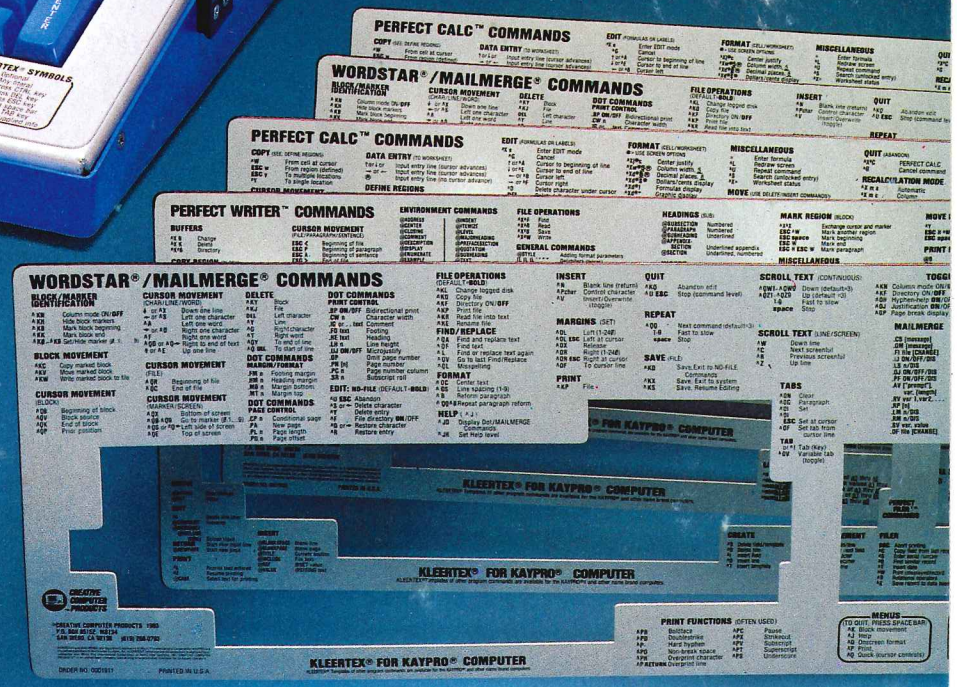

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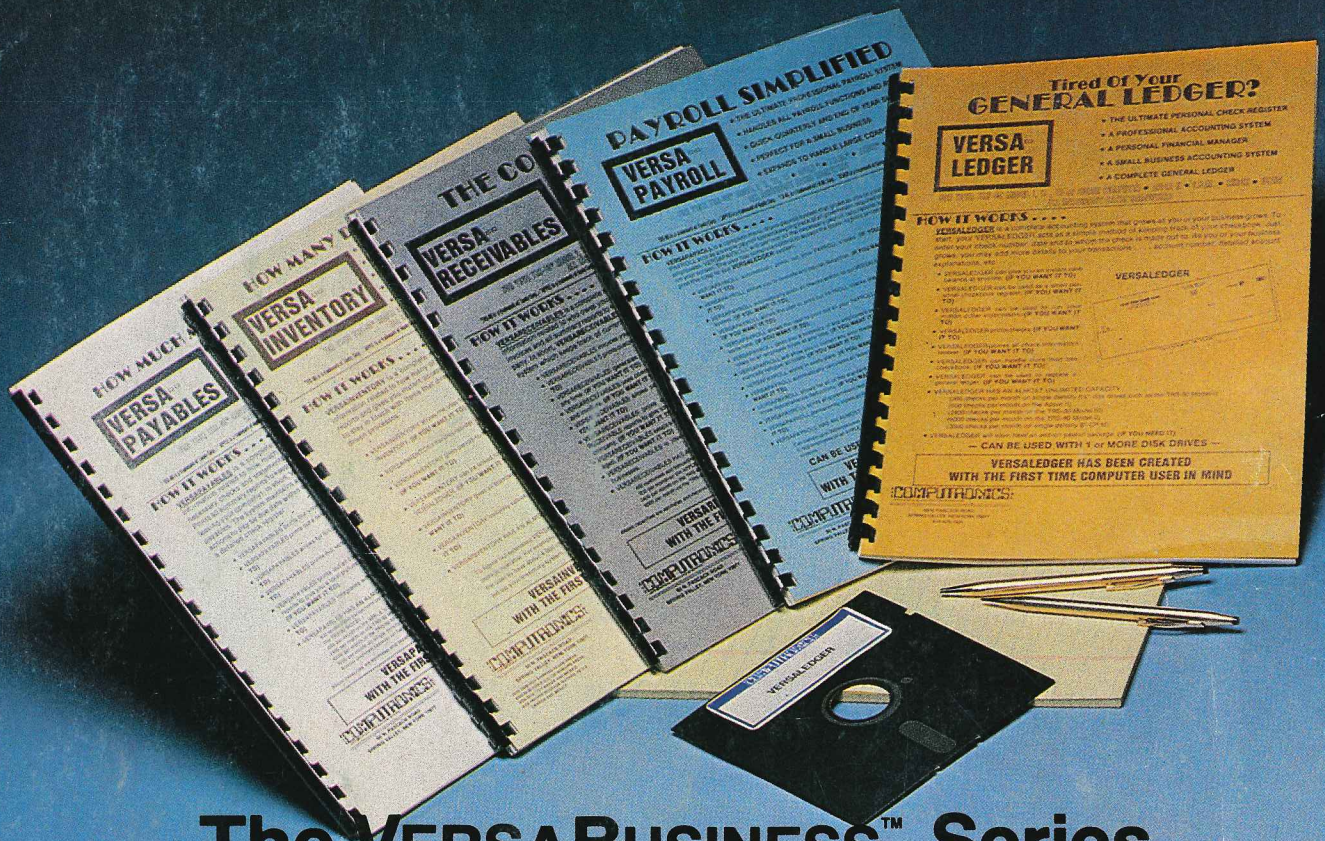

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