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NOVEMBER 1987

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Don't worry that your software won't work with this printer. This printer does everything right. The Cosmo Writer is compatible with the Diablo 630, the industry standard of daisy wheel printers. Virtually all software on the market (non- graphics) will operate beautifully with this printer. This includes bold facing, double strike, underlining, subscripts and superscripts. And character pitch can be set from the front panel.

The provided standard Centronics parallel interface is the industry standard printer interface for computers, including IBM PC and all PC clones, CP/M machines and virtually all other microcomputers built today.

Replace your typewriter

Included with this printer is a great little program called Deskteam. This program will allow you to directly replace your typewriter and use the printer for forms, envelopes, etc. Select direct type through, like your standard typewriter, or line mode, where you can enter and edit a line prior to printing it, just like the new expensive memory typewriters.

The most commonly made ribbons, Diablo HyType II, and printwheels, Qume, are used in this printer. Central offers a complete line of printwheels, ribbons and supplies. Both the optional push- pull tractor and optional cut sheet feed mechanisms can be attached in seconds.

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— Nylon Multi-strike 2-pak	C473	10.40
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One problem with most portables is short battery life. Not so with these Sharp machines: an average 7 hours operating without recharge using lead batteries. New breakthoughs in lead battery technology allow low weight and long life with none of the "memory" that limits the rechargability of nicads.

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THE ADVANTAGE ENHANCED

Kaypro Corporation — electronics innovator since 1952 — has made a good thing even better. The KAYPRO 286i Model C now features a 40-MB hard drive and the 101-key AT-style keyboard. With the latest standard feature enhancements, the KAYPRO 286i is the smartest choice in advanced computer technology.

Advanced.

The heart of the KAYPRO 286i is the 80286 microprocessor — with a processing rate of 10 MHz and 640 kilobytes of RAM. The perfect match for today's high productivity software.

And Enhanced.

The KAYPRO 286i Model C has a 1.2-MB floppy disk drive, plus a hard disk with 40 MB of storage. The KAYPRO 286i AT-style keyboard features the new 101-key layout with separate cursor control, numeric keypad, and 12 programmable function keys.

Perhaps the nicest surprise about the KAYPRO 286i/C is the suggested retail price of $2995.

You won't find distinctive metal construction, 10-MHz processing, and free name-brand software that includes WordStar Professional Release 4 in any other AT-type computer. Other company's extras are Kaypro standard features.

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The KAYPRO 286i Model C features...

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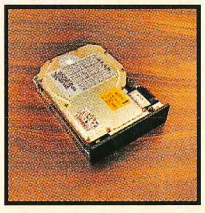
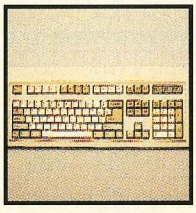
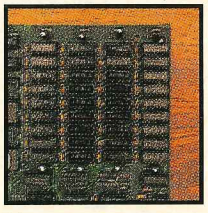


An internal hard disk drive with 40 MB of storage.



Enhanced 101-key IBM PC/AT-style keyboard with security keylock.



640 KB of RAM; expandable to 15 MB.

Bundled software includes WordStar Professional Release 4.

Trademarks: 286i, Kaypro Corporation; IBM, AT International Business Machines; WordStar Professional Release 4, MicroPro International.

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CONTENTS

1987
PROFILES
VOLUME 5 NUMBER 4 NOVEMBER

ON THE COVER

Artist, Darrel Millsap, gives us a creative look at an innovative idea. Juggling between your programs can sometimes take time, skill, and practice. But Task Switching Software makes you an accomplished juggler with a keystroke.

FEATURES

TASK SWITCHING SOFTWARE 16
By George R. Beinhorn
Most people need to use more than one program a day. We take a look at a new breed of software which lets you switch programs instantly.

PUT YOUR LAPTOP AND DESKTOP ON SPEAKING TERMS 24
By Ed Quillen
Transferring files from your laptop to any desktop computer can be a hassle. A null modem cable you can make yourself will simplify the task – inexpensively.

HOLIDAY GIFT GUIDE 33
Compiled by PROFILES Staff
Shop for the computer users on your list with these hardware and software products, AND save money with special coupon offers.

PROFITPLAN: A SPREADSHEET FOR THE REST OF US 40
By Wally Hodge, Yoshiko Murdick, and William Murdick
Get up and running with ease on this popular CP/M spreadsheet…even if you've never used a spreadsheet before!

"NEAR-DESKTOP" PUBLISHING 48
By Jim Spickard
Desktop publishing is the new hot topic, but the software can be costly. We'll give you a look at six MS-DOS programs that give you a low cost alternative.

CREATE CHARTS AND GRAPHS WITH LOTUS 1-2-3 55
By Daniel L. Schuster
Explore the graphics capabilities of Lotus 1-2-3 and analyze your data at a glance using pie charts, bar graphs, and line graphs.

DEPARTMENTS

PUBLISHER'S NOTES 4
LETTERS 6
Q & A 8
ON THE PRACTICAL SIDE 66
KAYPRO INSIDER REPORT 68
NEW PRODUCTS 69
PRODUCT UPDATES 71
ADVERTISER'S INDEX 72

COLUMNS

LIFE AT 300 BAUD 10
By Brock N. Meeks

DESKTOP PUBLISHER 12
By Ted Silveira

EDITOR'S CHOICE 62
By Tom Enright

AT A GLANCE 64
By Tom Griner and Leonard Leenheer

PROFILES

PUBLISHER
GWYN PRICE

TECHNICAL EDITOR
TOM ENRIGHT

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MARSHALL L. MOSELY

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JIM SPICKARD

CONTRIBUTING WRITERS
BROCK MEEKS
WILLIAM MURDICK
ED QUILLEN
DANIEL SCHUSTER

ART DIRECTOR
SUSN PENN

CONTRIBUTING ARTISTS
PETER HORJUS - ILLUSTRATOR
STACY KRIKORIAN - ILLUSTRATOR
DARREL MILLSAP - ILLUSTRATOR
RICHARD STARKMAN - PHOTOGRAPHER
GLENN STEINER - PHOTOGRAPHER

PRODUCTION MANAGER
MICHAEL F. HERBERT

CIRCULATION MANAGER
STEPHEN W. PHILLIPS

CIRCULATION
P.O. Box 2889
Del Mar, CA 92014
(619) 481-4353

ADVERTISING
249 S. Highway 101, Suite 321
Solana Beach, CA 92075
(619) 259-4469

EDITORIAL OFFICE
533 Stevens Avenue
Solana Beach, CA 92075
(619) 481-4353

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PUBLISHER'S NOTES

RICHARD STARKMAN

A COMMITMENT TO CUSTOMER SUPPORT

The issue of customer support has been a hot topic lately in the microcomputer industry, and it's one that is decidedly making or breaking manufacturers. With all the hardware and software products to choose from, weary consumers are looking to those suppliers who offer more than fancy packaging or low prices. Consumers demand a solid product, ease of use, and excellent service. And they deserve it.

Kaypro has long recognized the importance of service and support to its customers, realizing that by providing these it can provide a more positive computing experience for the Kaypro user. In addition to the Kaypro dealer network and technical support departments (both considered among the best in the industry), there are Kaypro User Groups (KUGs) and last, but certainly not least, *PROFILES* Magazine.

During my four years at *PROFILES* (first as assistant publisher, and now as publisher), I've seen a great many changes take place in the magazine—and so have you: changes in format and editorial direction, changes in typeface and design, changes in staff and contributors. In the months ahead, you will continue to see some minor changes (see this month's "Letters" column), initiated to deliver what we promise—uncompromising customer support for *all* Kaypro computer users.

Whether you are a CP/M or MS-DOS user, and whether you're beginning, intermediate, or advanced, let *PROFILES* be your forum. Please send me any of your ideas for articles or columns—I value your input.

Gwyn Price

General subscription information can be found on page 11. Our basic one-year rate is $25 for 12 issues. If your first issue does not arrive within eight weeks after ordering, or you miss an issue, please write to us: PROFILES Magazine, P.O. Box 2889, Del Mar, CA 92014. We'll extend your subscription or send the issue. To direct PROFILES to a new address, attach a recent mailing label plus your old and new addresses. Allow eight weeks for processing. International subscriptions are available directly through PROFILES Magazine only. Our regular yearly international rate is USD $40 (includes postage). Checks MUST be drawn on a U.S. bank in U.S. dollars ONLY.

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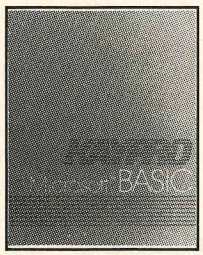

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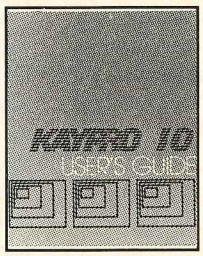

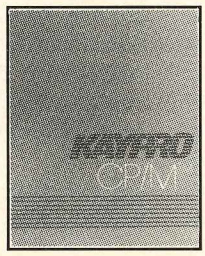

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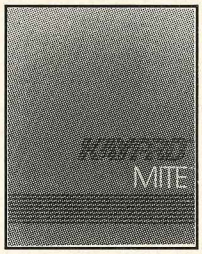

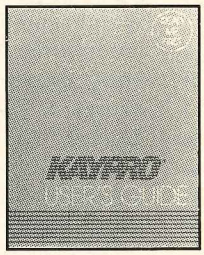

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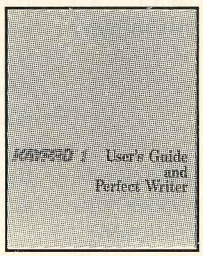

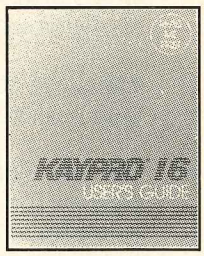

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LETTERS

TAKING OUR LICKS

I have owned a Kaypro CP/M machine (IV '83) since April 1984. I have seen a lot of changes taking place since that time. However, I am convinced that I have exactly what I want and only what I need. I gained most of the knowledge I have about my Kaypro through the articles and readers' correspondence in *PROFILES*.

I suppose some of the changes that have taken place in the *PROFILES* format have been inevitable, but, overall, most have been harmful from the standpoint of CP/M users. Personally, I liked the idea of two separate editions (one for CP/M and one for MS-DOS), but, of course, a few who wanted both cried a little and convinced you that one edition was best.

All this time you have been promising that you would not abandon us CP/M users. You are now dropping the "Flea Market" column, a great source of CP/M programs, for a column that will deal with desktop publishing (which, by nature, will be mostly MS-DOS). It's another slippage into the nether reaches into which I have no desire to go.

This letter is not to tell you that I am cancelling my subscription, or that I plan not to renew, since *PROFILES* is the only constant and reliable source of Kaypro and CP/M information I have. I am, however, very disappointed in the direction in which I see the magazine heading, and I wish I could impede what I perceive to be this progressive deterioration.

Anthony Marks
Le Grande, Oregon

Several CP/M readers have expressed the same concerns as Mr. Marks, and we feel strongly that they must once again be addressed.

First, because PROFILES *readers represent such a wide array of systems, uses, and levels of expertise, it is very difficult to be all things to all readers in every issue. We simply do not have the space. However, each month we try to include a variety of topics that appeal to the greatest number of readers.*

Second, we have no intention of abandoning the loyal CP/M users. As the coverage of CP/M wanes in other publications, we feel an even greater responsibility to provide ongoing information to the computer users who put Kaypro on the map. Look for more CP/M material in upcoming issues of PROFILES, *including Ted Silveira's review of WordStar 4.0 for CP/M. For more good news, read on.*

BRING BACK TED!

Admittedly, "Flea Market" was far from being the ideal title for Ted Silveira's column but, rest assured, it was read by *everybody*, including folks interested in desktop publishing. In the future, alas, Ted's specialized pieces will be widely ignored by us folks who couldn't care less about desktop or any other kind of publishing. The universal appeal of his choices of wide ranging topics will be sorely missed.

John W. Price
Jamaica, New York

As a long-time *PROFILES* subscriber, I was disappointed to learn that the best column the magazine ever offered was being discontinued. I am referring, of course, to Ted Silveira's excellent "Flea Market." As interesting as the topic of desktop publishing may be, I hate to see a columnist of Silveira's caliber limited to one subject.

Popular support kept "Star Trek" on an extra season. Any chance of "Flea Market" coming back for a while longer?

WIlliam C. Sharp
Lawrence, Kansas

Yes—but with some modifications. In addition to the "Desktop Publisher" column (already gaining a steady following), Ted Silveira is "booting up" two new columns scheduled to begin with the January 1988 issue. One column (to appear monthly) will deal with CP/M programs available commercially and in the public domain. The other, covering shareware, will be strictly for MS-DOS users and will run as space allows.

These two columns are, as yet, untitled. Any PROFILES *reader who suggests a winning title for either the CP/M or MS-DOS column will receive a lifetime subscription to* PROFILES.

LASER PRINTING WITH A KAYPRO 10

In his article "Near-Desktop Publishing" (September 1987), Jim Spickard says that desktop publishing is only available to MS-DOS users. CP/M users are left out in the cold.

While it is true that CP/M users cannot take advantage of the current page makeup programs, it is a misconception to believe that they cannot take advantage of laser printers.

For the past 18 months, we have been using a CP/M Kaypro 10 with a patched WordStar 3.3 to produce a variety of documents (reports, art work, resumes) on a Canon laser printer. The results are excellent.

While "what you see" is often "not what you get," the laser print quality is far superior to anything produced on a dot matrix printer. CP/M users do not have to settle for "near-desktop publishing."

Frances L. Bergesen
Philadelphia, Pennsylvania

PLAYING GAMES

I recently upgraded from a PCjr to a Kaypro PC-30. One of the features that the PCjr had was cartridge BASIC. I had no problem running game disks because BASIC was always present in drive A when invoked by a few lines from an AUTOEXEC or BAT file. With the PC-30, I can transfer all my game disks into my hard-disk BASIC directory, or individually run each file by typing:

RUN"A:filename.BAS"

I do not want to fill my hard disk with game programs that I only use occasionally. Is there a small batch program that I

can type and save that would make BASIC on drive C present on drive A so I can run my game disks?

Tom Takesian
Annapolis, Maryland

The best solution is to use the MS-DOS command PATH to designate the directory path, which is a route through your hard disk's directory structure. When you run a program, MS-DOS will first look in the current directory for the program file, then look along the directory path for the designated file.

On most PC-30s GWBASIC is in the utility directory, so at the system prompt type PATH = C:\UTILITY and press Enter. Now place your games disk in the A drive, log onto the drive, and run any game by typing GWBASIC FILENAME. You don't need to type the BAS extension. For more information on PATH, read your MS-DOS User's Guide.

Correction

The October, 1987 issue of PROFILES contained two incomplete paragraphs within our feature "Short cuts to Formatting with WordStar" (page 25). Following are the completed paragraphs. We apologize for the errors and regret any inconvenience to our readers.

"The date line precedes the heading so that the heading will not be printed on the first page. The .HM 5 command sets the heading margin for maximum white space between the heading and the text.

"To create a letter, you simply open the letter file, then read in your format file with ^KR, and you've "remembered" all your format settings."

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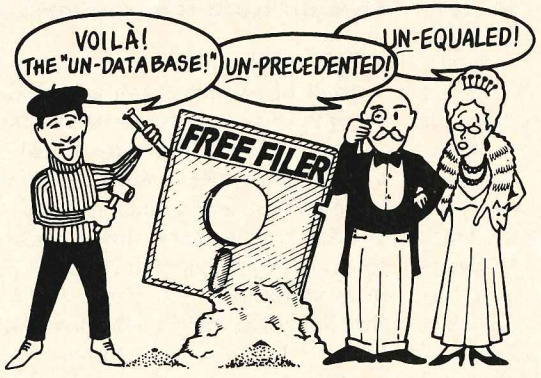

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Q&A

BY MARSHALL L. MOSELEY

I enjoy using the Master Menu program that came with my Kaypro 286i. But I've run into problems running MASMENU.EXE from MS-DOS—it doesn't work. I can only get the program to run by using the batch file that came with it. Why is that? Also, can I modify Master Menu to run programs that didn't come with my Kaypro?

Master Menu is without a doubt one of the most popular programs ever produced by Kaypro Software Engineering. Its rules of operation are complex, though, and it can be unforgiving if modified incorrectly.

For those of you who don't know about it, Master Menu is the MS-DOS "shell" program that Kaypro supplies with its hard disk-based computers. The original program was written in S-BASIC for the CP/M based-Kaypro 10 and was rewritten in C when Kaypro began manufacturing MS-DOS computers. Like many shells, Master Menu replaces the MS-DOS command line by displaying a list of programs on screen. This list is called a menu; you run the desired program by using the arrow or letter keys to highlight the program name on the menu and pressing Enter. When the program ends you are returned to Master Menu at the point where you left.

Master Menu consists of four files: MASMENU.TXT, MASPREP.EXE, MASMENU.DAT, and MASMENU.EXE. MASMENU.TXT is an ASCII text file containing all the text and commands for every menu the program displays. MASPREP.EXE is a program that reads MASMENU.TXT and produces the data file MASMENU.DAT, which acts as an index to MASMENU.TXT. When the program file MASMENU.EXE runs, it uses the information in the data file to locate the correct text and commands within the text file.

Master Menu is finicky; all three of its files—MASMENU.EXE, MASMENU.DAT, and MASMENU.TXT—must be in the current directory, or it will not run.

Also, Master Menu must be invoked using a batch file. Running MASMENU.EXE from the MS-DOS command line and selecting a menu option causes the program to bomb. This happens because Master Menu operates by creating and running short, temporary batch files and passing control to them. Under MS-DOS, one batch file can run another, but a program executed from the command line usually cannot, so Master Menu must appear to the operating system as a batch file running another batch file.

You can customize Master Menu by editing the text in MASMENU.TXT and using MASPREP.EXE to generate a new data file. This is too complex a subject to cover here, but a good source of information is William Murdick's article "Mastering Your Master Menu" in the May 1896 issue of *PROFILES*.

Colors, unjustified or justified text, and a clock are all available under Master Menu.

This article was written for the CP/M version of Master Menu and does not cover the new features recently added to the MS-DOS version: color adjustment, a black and white mode, unjustified or justified text, and a clock display using standard or military time. These features are explained in the first few pages of MASMENU.TXT; there you'll also find documentation on the new features and a tutorial on Master Menu modification.

Be warned: changing MASMENU.TXT means you have crossed the line from computer user to computer programmer, with MASPREP.EXE acting as a pseudo-compiler. If there is just one mistake in MASMENU.TXT—a dropped comma, an extra quotation mark—MASPREP.EXE will choke on it, displaying a cryptic error message and exiting to the system. So read the documentation, be careful, and watch your syntax.

I have a Kaypro PC-30, and one of the programs I use often is WordStar 4.0. The problem is every time I change subdirectories and try to use CorrectStar, WordStar displays an error message stating that it can't find its overlay files. What is wrong, and how do I fix this?

Unlike previous releases of WordStar for MS-DOS, version 4.0 recognizes subdirectories. Because it can roam anywhere on the hard disk, WordStar 4.0 needs to know where on the disk its overlay and dictionary files are located. For that it uses the *search path*, which is the route it follows through the directory structure to find the files it needs. The search path is defined exactly like a directory path under MS-DOS.

The early versions of WordStar 4.0 distributed by Kaypro had the search path set to \WS4, which didn't even exist on Kaypros at that time (yes, that's right, we made a mistake). The search path has since been changed to \MAIN\WRITE, matching the structure created by the Kaypro Autoload disks. In some cases users have modified their directory structure, so when CorrectStar looks for WordStar files in the WRITE directory it doesn't find them.

The solution is to use the WordStar configuration program known as WSCHANGE.EXE to designate a new search path.

WSCHANGE is a menu-driven program that allows you to adjust almost every default setting within WordStar 4.0. Running WSCHANGE is easy. Owners of floppy-based systems should start with their MS-DOS working disk in the A drive. Put the files WS.EXE, WSCHANGE.EXE, and WSCHANGE.OVR on a test disk, place it in the B drive, and log onto that drive.

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Hard disk owners should simply switch to the WRITE subdirectory by typing **CD \MAIN\WRITE** and pressing Enter.

Type **WSCHANGE** and press Enter. The program begins by asking you what the name of the original WordStar file is. Type **WS.EXE** and press Enter. You are then asked what the name of the new, changed, WordStar should be. If you were to type WS.EXE in reply to this question, WSCHANGE would overwrite the original file while creating the new one. In this case we are making a test copy, so type **WSTEST.EXE** and press Enter. If the test copy works, you can rename it WS.EXE later.

From the Main Installation menu, choose the third option, "Computer," by typing **C**. You do not have to press Enter; once you hit a key, WSCHANGE automatically takes you to the next menu. From the Computers menu, type **D** to choose "WordStar Files." Now choose the first option, **A**, to select "File Search Path." You will see a menu that explains your options, lists the current search path, and asks you if you want to change it. Answer yes by typing Y. Now type the path along which you want WordStar to search. For example, if WordStar is now in the LETTERS subdirectory of MAIN, you would type **\MAIN\LETTERS.**

To exit WSCHANGE press X three times until you reach the question "Are you through making changes?" Reply Y, and your installation of WordStar is complete.

Test WSTEST.EXE by running it in the LETTERS subdirectory. Log onto another directory and type **^QL** to test CorrectStar.

I've been reading a lot about something called a "mouse" lately. I use my Kaypro MS-DOS computer mostly for business—data base, spreadsheets, accounting and the like. If I use a mouse will it make me more productive?

Right now you don't need a mouse to use your computer productively, but that may change.

A mouse is a computer input device that provides an alternative to the keyboard. It consists of a small plastic module set on wheels or a rolling ball so it can roll across the desktop. A typical mouse has two or three buttons on it (the number of buttons depends on the brand of mouse). In most cases a wire connects the mouse to the rear panel of the computer. The module and wire sit on your desk looking like a mouse with a long tail (hence the name). A mouse can be connected to a serial port or to an expansion board inside your computer.

When you run software that can use a mouse, it shows up as a small arrow on the screen that moves when you move the mouse. This arrow takes the place of the MS-DOS command line. Instead of typing a command at the keyboard, you might select that command from a list onscreen by placing the arrow over the command name and pressing a button on top of the mouse.

The most prevalent use of mice today is in CAD (computer-aided design) and CAE (computer-aided engineering) software, such as AutoCAD and VersaCad.

Additionally, mice are used in "windowing environments." A windowing environment is a program that takes the place of your computer's operating system. Instead of typing commands, you select options from menus encased in little boxes (windows). For example, instead of logging on to drive B in the usual manner, in a windowing environment you would place the mouse-arrow on a little picture of disk drive labeled "B" and press the button.

There are many mice available today, and it's not always easy to select the right one. A basic rule of thumb is choose one that is compatible with either the Microsoft Mouse or Mouse Systems Mouse. These two mice are widely used, and any mouse software you buy will undoubtedly have drivers for them. The Torrington Manager Mouse distributed by Kaypro, for example, is Mouse Systems Mouse compatible.

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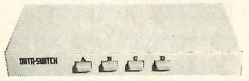

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ONLINE DATA BASES: WEAPONS IN THE 'INFORMATION WARS'

RICHARD STARKMAN

BY BROCK MEEKS

Competition—it's the lifeblood of business. And no matter where you compete, success often depends on how much information you've been able to gather and analyze. The buzzword for this process is "competitive intelligence" (or just "CI" to the cognoscenti.)

Hardball CI tactics in the information wars include stunts like taking aerial photos of parking lots (to count employees), rifling through corporate dumpsters, counting box cars, and conducting fake interviews. Most CI experts, however, prefer to use the resources of online data bases. It's completely legal—all information retrieved is public.

"There is no need for a corporation to engage in industrial espionage," says Rob Aaron, a principal of Aaron/Smith Associates, an Atlanta-based information gathering firm. "Our firm specializes in gathering data from more than 1,000 data bases."

If you spend enough time with the information gathered, he says, you can draw amazingly accurate conclusions.

ONLINE ARSENAL

Alfred Glossbrenner, in his book *How To Look It Up Online*, says, "Whether you're buying stock, acquiring companies, or maneuvering for a competitive advantage, you can vastly improve your chances if you've got the information." The majority of this information is available online. Glossbrenner also notes, "Business information is the hottest, most competitive section of the electronic universe right now."

According to Matthew Lesko, author of *Information U.S.A* and *The Computer Data and Database Source Book*, there are more than 3,000 online data bases available to the public. All these data bases comprise a kind of online arsenal, and everyone from giant multinational conglomerates to small businesses has access to the same "information weapons."

"It amounts to a classic David-and-Goliath showdown," says Carol Galvin, marketing manager for Business Research Corporation's InvesText service. Online data access "gives the bigger companies more clout, but it's also giving the smaller companies a better slingshot," she said.

Often a single, obscure data base provides a vital piece of information. Rob Aaron cited a little-known data base tailor-made for CI applications: PIERS (Port Import and Export Research Service) run by Knight-Ridder. "It is an online gold mine," says Aaron.

PIERS tracks every incoming and outgoing ship—in every U.S. port—by uploading each ship's manifest to a central computer. In addition to the manifest, each shipment's destination and supplier are also input on the computer.

This data base is extremely useful for tracking how much of a competitor's product is being exported and where it is going. It is also useful for assessing the general health of a particular industry.

CI AT WORK

Online sources are essential for gathering what Aaron calls "outside information." Most well-run companies have a good idea of the types of information they generate, such as financial information, customer and product lists, and the like. However, Aaron notes, "Most companies are ignorant of how much information is available for tracking a competitor. So we're hired to do their homework."

Aaron points to a case history. One of his clients (he declined to supply the name) wanted to buy a factory producing a cellophane-like product. "Our client needed to know what a reasonable asking price would be for the plant. So we set out to arm them with all the relevant facts."

Aaron started by using the Investext data base to discover the owner of the plant: a multinational conglomerate. But there was no information on the output of the plant, or its net worth, both indispensable pieces of information. To obtain that information, Aaron first searched through the local business press. "Executives of regional firms are more comfortable when talking to the local trade press," Aaron said, "and

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they'll often spill a lot of details to a local reporter. That stuff doesn't get reported in *The Wall Street Journal*."

To gather information from the regional press, Aaron says he might tap into a data base such as Business Dateline, Regional Business News, or Area Business Databank. These data bases cover several hundred local newspapers and business journals.

Using information gathered from these data bases, Aaron discovered the target plant was undergoing a major renovation, tripling its capacity, and had recently put on a hiring drive. Then by tapping a biographical data base (these include the Marquis Who's Who and the Standard and Poor's Register), he found that the person in charge of the factory had been promoted to the head of the plastics division, which indicated to Aaron that the parent company had a continued interest in that particular product line.

By monitoring the local newspaper via the VU/TEXT data base, Aaron found a complete description of the plant's machinery and the refurbishing cost, some $12 million.

"With all that information on the table, the acquisition talks were much more open," said Aaron. "The plant's owners figured they had nothing left to hide. My client was in the driver's seat. They knew if the other company was blowing smoke or was serious about making the deal."

BEYOND POWER BROKERS

Most of us will never spearhead a hostile takeover attempt or a billion-dollar merger. Does that mean CI has no value for you and me?

"Absolutely not," says Matt Potter, a former city planner, political aide, and newspaper reporter who now heads For the Record, a self-styled "information consulting firm." Potter describes his work as helping clients gather information as mundane as trust deeds or as explosive as corrupt political transactions.

Potter believes that CI can "help make the system work for you, instead of against you"—the "system" being government at every level from local to federal.

Potter believes that small businesses can especially benefit from CI. He cited a case in which a small shop owner used CI to expose an unfair redevelopment project that would have destroyed the small shop's business. Using mostly newspaper data bases, the small businessman uncovered unethical ties between the proposed developer and a local politician. He took this information to the city's district attorney and an investigation was opened. The project was eventually declared illegal and his business was saved.

There are two ways to stay abreast of your field; the easy way is monitoring data bases.

CI can also boost your career by helping you stay abreast of developments in your field, and anyone from an astrophysicist to a zoologist can benefit from it. There are two ways to keep up: the hard way and the easy way. The hard way is to read every professional trade journal published in your field and scour the daily newspapers. (This gets the job done, but you'll have no social life to speak of.)

The easy way is to enlist the power of SDI—not "star wars" technology, but the CI technique known as "selective dissemination of information." Aaron defines SDI as "continually monitoring a data base, in reference to a specific topic, using a pre-defined set of keywords." In essence, you set up an electronic news clipping service.

CONTINUED ON PAGE 15

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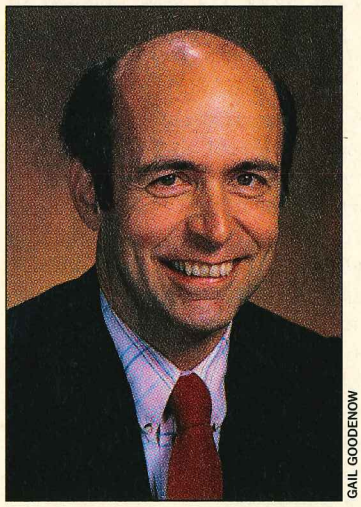

GAIL GOODENOW

TANGLING WITH TEXT.

BY TED SILVEIRA

Writers deal mainly with text—words, sentences, shades of emphasis and meaning. Visual artists deal mainly with graphics—lines, shapes, shades of light and dark. Desktop publishers, however, deal with both.

Like any form of publishing, desktop publishing is mainly the art of combining text and graphics to produce a printed page. And desktop publishing software—a page make-up program like Ventura Publisher—is really just a tool for integrating text files and graphics files via computer. On the whole, these programs do a good job of combining text and graphics, but often they have to work with text and graphics files from many different sources, produced by programs that were never meant to work together.

As a desktop publisher, you'll find yourself spending as much time—or more—struggling with problems of file formats and file management as you spend actually making up pages. Fortunately, there are ways to keep both the work and the problems to a minimum. This month, the topic is text; next month, graphics.

In what follows, I'm assuming that you, the desktop publisher, are working with text produced by one or more writers, but the same points apply even if you're producing all the text yourself. I'm also going to assume that you're working with Ventura Publisher, which I think is the best of the MS-DOS page make-up programs (though again, most of the tips will apply to other programs as well).

WORD PROCESSORS

You and your writers should always use your word processors to create and edit text. Despite the fact that page make-up programs all have text editors built in, they are not for writing. They're barely adequate even for light editing. Ventura Publisher has a great advantage among page make-up programs here because it keeps your source text files separate and intact but updates them with any changes you make. That way, you can easily switch back to your word processor if you need to do any heavy editing or rewriting.

If it's possible, you and your writers should all use the same word processor. If you do, you'll all be able to exchange files freely (a lifesaver when you have lots of last-minute changes to make), and you (the desktop publisher) will only have to learn the peculiarities of one file format instead of several. Realistically, it's difficult to get a writer to change from his or her chosen program, but it's worth a try.

At the very least, you should try to make sure that all your text files come in a format that can be read directly by your page make-up program. Ventura Publisher can read most major formats—WordStar, Microsoft Word, WordPerfect, Xywrite (in Ventura 1.1), DCA, and others—but there's always some oddball format waiting to trip you up. If your page make-up program can't read a particular format that one of your writers uses, have the writer submit a straight ASCII file—what you want is a plain text file with no special characters or control characters. Even if the writer's word processor can't write such a file, there are many conversion programs, both commercial and public domain, that can "filter" the original text file to create one.

Special note: If you get an ASCII file that has a single hard carriage return at the end of every line and two hard carriage returns at the end of each paragraph, tell Ventura Publisher to read it as an ASCII file—Ventura will ignore the single carriage returns and translate the double ones to a paragraph ending. If you get an ASCII file that has no carriage return at the end of a line and only a single carriage return at the end of each paragraph, tell Ventura to read it as a WordStar file—it will translate the single return to a paragraph ending. If you get a WordStar document file with two hard carriage returns at the end of every paragraph, Ventura will interpret the second carriage return as a blank paragraph—not what you want. Rather than deleting all the extra carriage returns yourself, just insert the line **@ para-filter on =** as the first line in the text file, and Ventura will remove the extra returns for you.

If possible, have the writer do any file

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conversion that's necessary—you're going to have enough to worry about. But in all cases, get sample files from each writer well before deadline time to make sure that you can read them into your page make-up program.

TEXT FORMATTING

Word processors are for writing; page make-up programs are for formatting. Do *not* have your writers do any fancy formatting in the files they submit. In fact, don't *let* them do any if you can avoid it. First of all, if the writers have to worry about sophisticated formats, they'll be distracted from their main task—getting the words right. Second, even if a writer can approximate your final format on a word processor, you'll almost certainly have to do it over—heavy formatting doesn't transfer well.

Don't let writers do any fancy formatting; instead create a standard format for all incoming text.

Instead, create a standard format for all incoming text that tells writers how to handle paragraphs, headings, bold and italic markings, and so forth. It's best to use block-style paragraphs (unjustified, no opening indent), headings and sub-headings each on a separate line (flush left), all kinds of lists flush left (no indent), and some simple coding to mark headings and boldface or italic words (like {**hl1**} for a level 1 heading and {**b**} for boldface). With Ventura Publisher, you have the option

CONTINUED ON PAGE 14

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CONTINUED FROM PAGE 13

of using the @= coding to mark headings and so forth, because Ventura can interpret these codes directly if you have them defined in your style sheet.

If your writers feel they must do some basic formatting—of a table, for example—have them use tabs instead of spaces to line things up. When you make up a page with full justification and proportional type, the width of a space will vary from one line to the next, so anything that was aligned using spaces will look awful.

Also, writers should not use either spaces or tabs to indent the first line of a paragraph. Ventura Publisher (and any other decent page make-up program) can create a first-line indent automatically. If someone has inserted tabs or spaces there, you'll have to delete them all, paragraph by paragraph. (The same goes for bulleted or numbered lists, indented text, and similar items. Have the writers do it all flush left, unjustified, and let the page make-up program do the formatting.)

MANAGING TEXT FILES

Though I like Ventura Publisher's system of keeping the text source files separate and distinct, yet always up to date, it does mean that you can suddenly find yourself with a horde of text files on your hard disk—without a clue as to which ones are important and which ones are not.

With Ventura Publisher, I prefer to set up a separate directory for each publication and keep everything related to it in that directory. That's not always possible or desirable, though, especially when you have several publications that share some of the same material (like issues of a newsletter, for example). But once you've started building your publication, don't start moving the files around your hard disk—leave them where Ventura found them originally, or it will get confused.

In any case, you need to settle on a consistent naming system for your source text files so that you can tell at a glance which ones belong together. If you give all the files of a publication names that start with the same letters—NEWS01-A, NEWS01-B, NEWS01-C, etc.—then they'll all be grouped together in an alphabetized directory listing, making your job easier.

Once you start building your publication, don't move files around or Ventura will get confused.

Don't, however, use the file type to differentiate files (i.e., NEWS.001, NEWS.002, etc.). Instead, use the file type to signal what kind of file each one is—NEWS01-A.WS for a WordStar file, NEWS01-A.TXT for an ASCII file, NEWS01-A.MSW for a Microsoft Word file, and so forth. Ventura will love that, because it remembers what directory you got certain kinds of files from and what the file specification was (*.WS, *.TXT, etc.).

Finally, keep careful track of the revisions of your various text files and style sheets as you go. If you want to save a version of your publication as a backup while you experiment with various changes, copy all the publication's files onto floppies; then proceed. *Don't* keep anything other than the current version of your publication files on the hard disk—the various versions are almost certain to get mixed up if you do.

A FEW DETAILS

When you start building a publication, set up your style sheet and paragraph tags right away, defining all the elements you think you'll need (if you end up with a few extra, that's OK). Don't worry about getting all the details of the formatting just right—just create the style sheet and then tag the text files as you load them. Once you have everything tagged properly, you can make global changes very quickly, experimenting until you find just the right format.

If you're going to use a style sheet from a different publication, I suggest you load the style sheet and then immediately use **Save As New Style . . .** to save the style sheet under a name appropriate to your new publication. More than once, I have messed up a previous publication by loading its style sheet as a model, making a few changes to suit the new publication, and then inadvertently saving it under its original name.

Two minor details: First, Ventura's maximum word spacing (found on the Paragraph Alignment menu) is too wide, especially if you're setting a narrow column, as for a three- or four-column newsletter. Don't forget to adjust it. Second, always check *all* the hyphenation at line breaks before you go to print. As a former typographer's proofreader, I can assure you that words don't always break where you think they do, much less where Ventura thinks they do. Check everything.

LASER TIP OF THE MONTH

With a program like Ventura Publisher and a laser printer, it's very easy to create various templates, forms, letterhead, and so on. If you're doing this, *don't* run off a batch of letterhead on the laser printer and then run the same sheets through the laser again to print the letters. If you do, there's a good chance that the heat of the second pass will cause the toner deposited on the first pass to come off the paper and fuse itself to the innards of the printer (specifically, the fuser wire), gumming up the works eventually.

To avoid this, you can run the letterhead on a laser printer and print the letter on a daisywheel or dot matrix printer (for the old-fashioned look). Or, you can use Ventura Publisher to merge your letterhead with your letter and print them both on laser printer at the same time.

CONTINUED FROM PAGE 11

A good example of this technique is the News Flash service offered by NewsNet. News Flash will continually check all its incoming information (from hourly news wire copy to more than 300 industry newsletters) against any keywords or phrases you've asked it to look for.

For example, a scientist doing research on superconductivity might simply specify the word superconductivity. Thereafter, each time NewsNet receives a new piece of information that contains the word "superconductivity" it automatically places the article (in full text) in a special holding file.

When it's convenient, the scientist logs on and downloads all the information waiting in the "clip file." Now instead of manually scanning several trade journals or newspapers and then clipping those articles, the scientist has the full text of the articles stored on disk for easy categorizing and recall.

This SDI technique can easily be used to monitor your competitor (by specifying a company name) or a specific product line.

THE REAL WORK

Although CI analysis is great for gathering large amounts of raw data, someone still has to pull all that information together; online work is only the beginning of a fully formed CI strategy.

Potter points out that organization and looking for patterns, trends or gaps, followed by more research to augment what's been missed the first time around, is where the "real intelligence factor" comes into the CI field. Online data bases can't supply all the answers. "A person's brain," Potter says, "is still the best source of data anyone can tap."

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TASK SWITCHING

Task-switching software makes juggling programs easy.

BY GEORGE R. BEINHORN
ILLUSTRATION BY DARREL MILLSAP

Have you ever wished you owned two computers so that you could move quickly between your word processing and spreadsheet programs? Have you ever felt frustrated by the hassle involved in transferring information from one program to another?

If you own an MS-DOS-based machine—just one—your troubles may be over. A little-publicized but extremely useful new kind of program called a "task-switcher" allows you to load two (or more) applications in RAM at the same time, then hop between them with a single keystroke.

If you have extended memory or a hard disk, task-switching software will even let you load programs whose total RAM requirements are far in excess of MS-DOS's 640K RAM limit. CONTINUED ON PAGE 18

Custom-build your own software package and switch programs with a single keystroke.

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CONTINUED FROM PAGE 17

For people who frequently need to hop between programs, the task-switching programs are a wonderful boon. Take, for example, a business executive who needs to refer to spreadsheet or database figures while talking with clients on the telephone. With a task-switching program loaded in his PC, moving from one program to another takes just five seconds. He never has to ask a client to call back in five minutes afater he's switched over to his spreadsheet.

Here's another example: the district sales manager for a heavy equipment manufacturer works all day with word processing and spreadsheet software. When she calls a client, a task-switching program transfers her instantly to the data base management program she uses to store client contact information. The database program dials the client's number, and while the phone rings, she reviews the client's data on the screen. When she hangs up the phone, she updates the client's record, then returns with a single keystroke to the spreadsheet she was working on before the call.

No need to exit to DOS to run Lotus; just press an Alt-key combination and - shazaam - you're there.

THE MECHANICS BEHIND THE MAGIC

How do task-switchers perform their magic? Not to get too technical about it, the task-switching program sits in its own small compartment of memory, where it manages the rest of RAM, dividing it into separate compartments in accordance with your specifications for size. To visualize this, think of a wheel with the task-switcher at the hub, controlling access to several RAM partitions located out on the rim. To move from one RAM partition to another, you invoke the task-switcher at the center, telling it your wishes, whereupon it dutifully closes the first partition and transfers you to the desired one.

When first loaded in memory, the task-switching program reads a set of parameters you've specified in advance. For example, you might decide to set aside 192K of RAM for WordPerfect, 256K for Lotus 1-2-3, and 128K for Smartcom, and have those three programs loaded in separate compartments of memory automatically, whenever you run the task-switcher.

Later in the day, you're working in WordPerfect and need to retrieve some figures from Lotus. No need to exit to MS-DOS and run Lotus; just press an Alt-key combination and—shazaam—you're in the second partition, Lotus. Having found the data you need, press another Alt-key combination and you're transported instantly back to WordPerfect, at the exact point where you were working in your document.

Task-switching turns full-sized programs into RAM-resident "pop-ups." Using a task-switcher is like building a huge integrated program composed of your own favorite "modules," instead of letting someone else choose the parts for you. Instead of buying Framework or Symphony, you can build a customized "super-integrated" program assembled from WordPerfect, Lotus 1-2-3, and dBASE, for example. (As we mentioned earlier, at least one task-switcher provides a way to defeat the 640K barrier and load programs with outrageous total RAM requirements.)

Compared to their sophisticated brethren—windowing programs—task-switchers are sparing in their use of memory. Microsoft Windows eats up more than 170K, while Software Carousel, a very full-featured task-switcher, uses only 32K. And on a standard PC, the task-switchers are much, much faster than windowing programs.

Using a task-switcher, you can give WordStar some of the windowing capability of programs like Microsoft Word and WordPerfect. By loading several copies of WordStar in memory, you can edit an equal number of files simultaneously and hop instantly between them. Moreover, you could work in the same hard-disk directory with several copies of WordStar at the same time, which would allow you to cut and paste text between documents very quickly with block write (Ctrl-KW) and block read (Ctrl-KR) commands.

In this article we'll look at two prominent task-switching programs and a third program, designed to be a hard-disk manager, that also offers task-switching capabilities.

RESIDENT

The simplest of the programs reviewed, Resident has several unique strengths: It permits installation of up to 26 applications in RAM, more than any of the others (though you'd have to be a real power user and own a mighty big expanded memory board to take advantage of that capacity); and it includes a bonus package of functional, if not spectacular, utility programs: a calculator, notepad, phone dialer, cardfile, ASCII table, and a decimal conversion program.

To load an application—WordStar, let's say—into a Resident memory compartment, at the MS-DOS prompt you'd type

"RESIDENT W,80 WS", where "W" is the key you'll use with Shift Alt to hop to the WordStar partition, "80" is the amount of RAM you want to allocated to the WordStar partition, and "WS" is the command that invokes WordStar from MS-DOS.

A separate program supplied with Resident, called "Prompter," sets up default programs and memory specifications to be loaded automatically whenever you run Resident from DOS.

If you specify less memory than the software requires, Resident suggests an absolute minimum based on its attempt to load the program. If you try to assign more memory than is available in the hardware, a message lets you know the amount of free RAM. A separate program called "Memlist" displays the memory requirements of many popular applications.

Once you've loaded several applications in separate segments of RAM, you switch from one to another by pressing Shift Alt and the predetermined "hot key." To jump to the WordStar partition we just created, you'd type Alt Shift W.

A menu screen, invoked with Alt Shift Spacebar, lists the installed programs with their hot keys and RAM allocations. A "Remove" command, used from MS-DOS, safely extracts applications from memory one at a time, beginning with the last-loaded program.

Resident allows data to be cut and pasted from one application to another. To invoke cut-and-paste, you type Shift and move the cursor to the start of the block to be copied, press Return, move to the end of the block, and press Return again. Now, bring up the screen where you want to paste the block, position the cursor, and press Shift- (the minus key, not the hyphen). You can specify the type of data being transferred (text or numeric) to preserve proper left-or right-alignment, and you can also retain a block in memory, where subsequent cuts will be appended to it. (The copy buffer holds just 4K, however.)

Resident's indexed manual is clear, complete, and includes helpful illustrations.

If your priorities in a RAM manager are simplicity and a short learning curve, Resident will fill the bill, but more expensively ($40 and $50, respectively) than Software Carousel or DOSamatic.

SOFTWARE CAROUSEL

At $49.95, and frequently discounted to $35 or less, Software Carousel is in the same low-priced ballpark as DOSamatic, reviewed below; but Carousel has a unique and very tasty flavor.

Over several years, Software Carousel's publisher, SoftLogic Solutions, has developed a series of interesting memory-management tools: Disk Optimizer, which speeds up hard disks by rearranging fragmented files; DoubleDOS, probably the only worthwhile multitasking program for PCs; Cubit, a

CONTINUED ON PAGE 20

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CONTINUED FROM PAGE 19

file-compression utility; and PCShare, a dual-user multitasking terminal system with software.

Carousel's sophistication reflects SoftLogic's experience in the memory tricks field. No desktop goodies or DOS front-end functions are offered, but Software Carousel pushes RAM-splitting to the limit. Carousel permits up to ten programs to be loaded in RAM, but the real news is that, because of its virtual memory capabilities, you can load programs whose total memory requirement exceeds the amount of RAM installed in your system. You could, for example, load three programs, each of which requires 512K of memory, in a system with just 512K installed. (All the task-switchers reviewed here can make use of expanded or extended memory.)

Software Carousel keeps track of which software you're using most and holds those programs in RAM, swapping other applications out to a hard disk or expanded or extended memory and retrieving them only when they're called. This gives Software Carousel a tremendous advantage over other task-switching programs, especially in systems limited to 640K of memory. If you have a hard disk, you can load a virtually unlimited number of programs.

Naturally, it takes a little longer to load a program from a hard disk than from RAM; still, it's surprising how quickly the program-hopping occurs. WordPerfect Version 4.2, with a whopping 267K command file, re-loads from a medium-fast hard disk in about five seconds. That's much quicker than exiting an application, switching directories, and loading WordPerfect from DOS.

SoftLogic's products share a sensible, clean user interface. The Carousel main menu lists memory partitions with the names you've given them and their invocation keys and RAM allocations. An "Options" box on the main menu leads to several sub-menus from which you can change the amount of memory assigned a partition, rename partitions, remove programs from memory, toggle Carousel's Help system on and off, and set new window invocation keys. Carousel is full of nice touches: for instance, when you leave an application, the DOS prompt shows the title you've assigned the current window and the amount of memory allocated to it. You can install Software Carousel on a hard disk, and it's not copy-protected.

SoftLogic's user manuals are first-rate: they are well-written, indexed, clearly organized, with plenty of tutorial examples and helpful visuals. They're geared to beginners, so experienced users may find them a bit wordy; but better too much than too little.

Once Software Carousel has been loaded, you switch between programs three ways: by jumping directly to the desired partition with an Alt-key combination, by cycling through the partitions sequentially, or by summoning the main menu with Alt-Spacebar and selecting the partition from a list with the arrow keys and Return.

To change Software Carousel's startup defaults (hot keys, applications you want to auto-load, etc.), you must edit a separate file (CAROUSEL.OPT) using a word processor, following lengthy instructions in the manual, then save CAROUSEL.OPT to an ASCII file. This seems a little inconsistent with SoftLogic's no-fuss style, but in practice the CAROUSEL.OPT file presents few mysteries. Here's a sample CAROUSEL.OPT, configured for two 256K partitions in which WordPerfect and askSam will be loaded automatically whenever Software Carousel is run:

```
FILE          = C
FILE          = 1000 (reserves 1000K of RAM and hard-
                disk space for Carousel's use)
SIZE 1        = 256
SIZE 2        = 256
NAME 1        = WordPerfect (displays "WordPerfect" at
                DOS prompt in partition 1)
NAME 2        = askSam (displays "askSam" at DOS
                prompt in partition 2)
PROGRAM 1     = cd\wp
PROGRAM 1     = wp (loads WordPerfect)
PROGRAM 2     = cd\asksam
PROGRAM 2     = s3 (loads askSam)
"AUTOMATIC"   (loads askSam and WordPerfect
                automatically)
JOB 1 KEY     = 2
JOB 2 KEY     = 3
HOT KEY       = BREAK (changes the "hot key" from Alt,
                to avoid conflicts with WordPerfect Alt-
                key assignments)
```

DOSAMATIC

DOSamatic is marketed primarily as a front-end system for hard disks, but RAM-switching is one of its many talents. Older versions of DOSamatic are available as shareware from user groups and public domain libraries. The commercial version (3.0) sells for $39 and adds customization of screen colors and the ability to handle up to 500 files per directory (versus 128 in the shareware versions). Version 3.0 also includes technical support and a nicely printed spiral-bound manual.

Besides task-switching, it offers file searching, masked directory listings (*.COM or *.WKS, for example), file browsing, checkdisk, volume labeling, file attribute changing, file copying, debug, edit, hexbrowse, rename, print, and a DOS command window.

From the FileMenu panel on DOSamatic's main screen, you can load as many as seven programs simultaneously in RAM. An "Autoload" feature can be configured to load a standard set of programs automatically, whenever task-switching is invoked.

With DOSamatic, you're not allowed to jump directly to a

Pop-up applications like SideKick and Superkey co-exist peacefully with DOSamatic.

given window; instead you must cycle through the windows one at a time to reach a desired partition. A "Task" field at the top of the main menu screen tells how many programs are currently installed in memory.

Pop-up applications like SideKick and SuperKey coexist peacefully with DOSamatic and can be used during a DOSamatic session, but software that manipulates the computer's hardware directly—programs that use graphics, for example—can cause problems. Though DOSamatic can start programs that take commands directly from the keyboard (such as Smartcom II and the Leading Edge Word Processor), you won't be able to jump back from these programs to the DOSamatic menu.

A TASK-SWITCHING CAUTION

The Intel 8086 and 8088 chips weren't designed for multitasking, and certain cautions should be observed when you use any task-switching program. With MS-DOS releases earlier than 3.0, you can't run COMMAND.COM in a RAM window; to avoid irretrievable system lockups, you must instead start COMMAND.COM, if it's needed in a partition, as the last task, assigning it all remaining memory. Also, it's very important to remove programs from RAM in the reverse of the order in which they were loaded.

WHO'LL BE A TASK-SWITCHER?

If you're going nuts hopping between Lotus, WordStar, and Smartcom, task-switching software was invented just for you. If you never feel frustrated by having access to just one application at a time, you can probably live without it. A task-switcher may only needlessly complicate your system.

Which of the three programs reviewed is best? In pure power

CONTINUED ON PAGE 22

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CONTINUED FROM PAGE 21

and utility, Software Carousel has the edge because of its virtual-memory abilities. If you own a hard disk and 640K of RAM or less, Software Carousel will let you enjoy most of the advantages of expanded memory at a tiny fraction of the cost.

Resident offers the quickest way to get up and running, with the bonus of some plain-vanilla desktop utilities. However, I feel it's overpriced.

DOSamatic is a good task-switcher that functions, through its main menu, as a RAM-resident file manager (one of the most useful items hard disk users can own).

DOS 5.0 and further descendants of MS-DOS will allow PCs to run several applications in a true multitasking environment—that is, not only will you be able to load several programs at once, but they'll continue to run "in the background" while you switch to other partitions of memory. Microsoft hasn't given an official release date for DOS 5.0 (DOS 4.0 is due "sometime in 1988"). For those who could benefit from the ability to leap between programs, task-switching software offers radical improvements in efficiency right now.

George Beinhorn is a freelance editor and writer in North San Juan, California.

QUICK REFERENCE SUMMARY

Product: Resident
Manufacturer: Information Software, Inc.
2639 Walnut Hill Lane #135
Dallas, TX 75229
Phone: (214) 353-2966
System requirements: IBM PC, XT, or AT or true compatibles; 128K memory, support for expanded and extended memory; one DSDD 5 1/4-inch drive, DOS 2.0 or later
Sugg. List Price: $89.95

Product: DOSamatic
Manufacturer: Marin Pacific Software
1001 Bridgeway, Suite 514
Sausalito, CA 94965
Phone: (415) 332-0219
System requirements: IBM PC, XT, or AT or true compatibles; 128K memory, support for expanded and extended memory; one DSDD 5 1/4-inch drive, DOS 2.0 or later
Sugg. List Price: $39

Product: Software Carousel
Manufacturer: SoftLogic Solutions
530 Chestnut Street
Manchester, NH 03101
Phone: 1-800-272-9900; in New Hampshire, 627-9900.
System requirements: IBM PC, XT, AT or true compatibles; 192K memory, support for expanded and extended memory; DOS 2.0 or later
Sugg. List Price: $49.95

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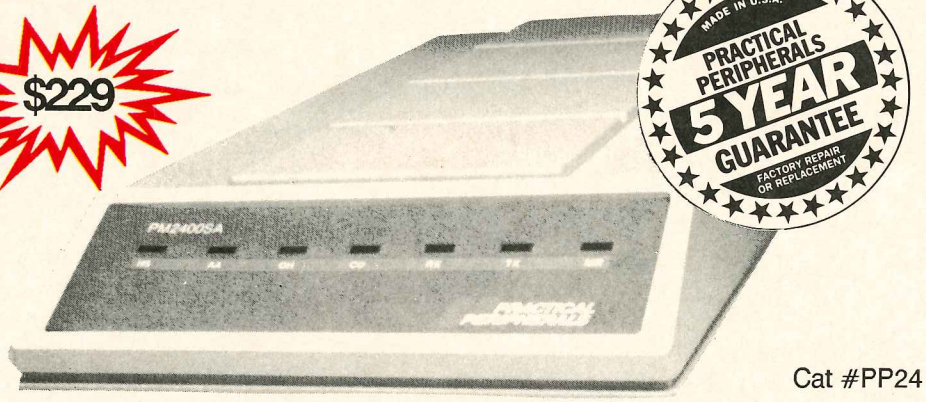

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Bottomline V	$199
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Landlord	$495
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Mite	$49
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Quiz Writer	$47
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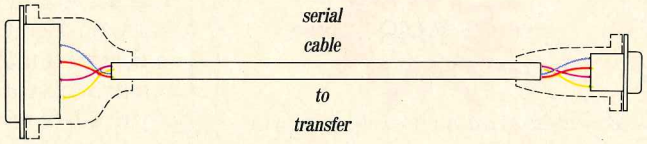
LAPTOP TO DESKTOP

How to make and use a serial cable to transfer files.



Laptop computers are great for working in the field or while you are traveling. They're convenient and very portable, but most people prefer to move the information to a desktop system for heavy-duty work. The easiest way to transfer data or programs from one computer to another is to remove a diskette from one machine and insert it into the other. Unfortunately, matters aren't always that simple.

If you are using a Kaypro 2000 and your MS-DOS desktop system has a 3 1/2-inch drive, you can take the disk out of the 2000 and put it in the other system. Otherwise, it may be a little more difficult. Most desktop systems use 5 1/4-inch disks, while the Kaypro 2000 uses not-so-floppy 3 1/2-inch diskettes. How do you get files from one computer to another one in a situation like this?

Even if the two computers have different disk formats or operating systems, they still have one thing in common—serial ports. Once you connect the serial ports with the proper cable, you can transfer files and programs from machine to machine easily and quickly. The purpose of this article is to give you enough information on serial interfacing to make a cable and transfer files from a laptop computer to a desktop system.

CONTINUED ON PAGE 26

BY ED QUILLEN

ILLUSTRATION BY FIONA KING
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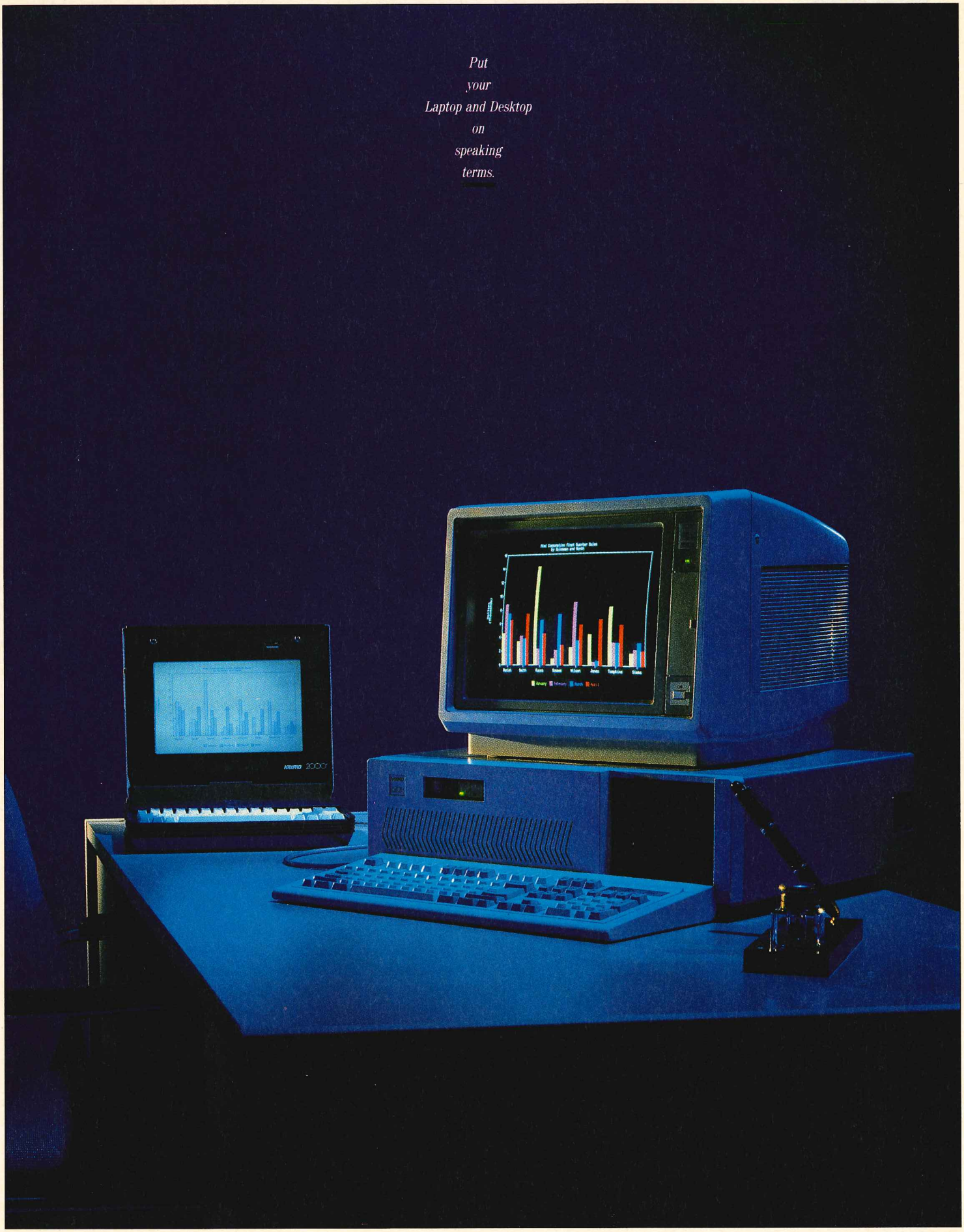

LEARNING ABOUT PLUGS AND SOCKETS

All Kaypro computers come with serial ports so that they can be connected to modems, plotters, printers, mice, and the like. Logically all serial ports are the same—they carry the same signals. Physically, they vary considerably. Some have only nine pins or holes; others have 25. All use a "DB" type connector. The nine-pin is the "DB-9" and the 25-pin is the "DB-25." Both also come in male and female versions.

So your first step is to examine the serial ports on the two machines you plan to connect. Then you'll know what kinds of connectors you need.

Remember that the connectors must mate—one has to be male and the other female. If there are pins on the machine's port, then it's a boy. Any cable you attach to it will require a female connector, which has holes for the pins to slide into. The male connectors are often called "plugs" and the female "sockets" or "jacks." A male component's formal name ends with "P" (DB-9P) and the female's with "S" (DB-9S).

The Kaypro 2000, for instance, has 25 pins on its serial port. You need a female to mate with it, so the appropriate connector is a DB-25S. An early Kaypro PC has a serial port with 9 holes. So that end of the cable would require a DB-9P. Later Kaypro PC's, as well as the 286 and 386 machines, have 9 pins on their port; they take a DB-9S. And CP/M Kaypros have 25 holes—you guessed it; a DB-25P fits on those ports. (Many Kaypro CP/M models have two serial ports—use the one marked "J4 Serial Data I/O".)

The variety of connections means your dealer is unlikely to have a cable for your needs.

This variety of connections means that it's unlikely that your dealer will have a ready-made cable for your precise needs, although it won't hurt to ask. He can certainly build a custom cable if you don't feel like doing it yourself.

MAKING YOUR OWN CABLES

Making your own cable is reasonably simple if you know how to solder and you're willing to spend a little time learning the basics of the serial interface. You'll save some money, too, but the best rewards are flexibility and a feeling of accomplishment.

To make your own serial cable that will link two computers—technically, it's a "null modem cable"—you need to purchase the proper connectors and hoods at an electronic parts store.

You'll also need some cable. Only three wires are required for the cable that we're building; four-conductor telephone cable, each conductor a different color, is cheap and widely available. How long? Three feet is probably the minimum for a convenient connection. Industry standards specify a maximum of 50 feet, but I've seen them extend as far as 300 feet.

Before you start soldering, though, you need to figure out which wire goes where.

Although the connectors come in several forms, the serial ports on Kaypro computers (and virtually all other personal computers) adhere to the RS-232C standard. This standard specifies voltages as well as more than a dozen logic signals. Not all of them are relevant here; the important ones, and their common abbreviations, are:

TXD	Transmit Data
RXD	Receive Data
RTS	Request to Send (or Ready to Send)
CTS	Clear to Send
DSR	Data Set Ready
CD	Carrier Detect
DTR	Data Terminal Ready
GND	Signal Ground

Note that many RS-232C interfaces have two grounds—a Chassis Ground and a Signal Ground. The only one we need is Signal Ground, which provides a reference level for the other voltages.

The Carrier Detect signal is needed for a modem that connects your computer to the telephone network. Many of the others—RTS, CTS, DTR, DSR—are employed by a printer to tell a computer when it can accept more characters. These signals aren't necessary when two computers are linked, but the computers still expect those signals. We fool them by shorting some signals into others.

CONTINUED ON PAGE 28

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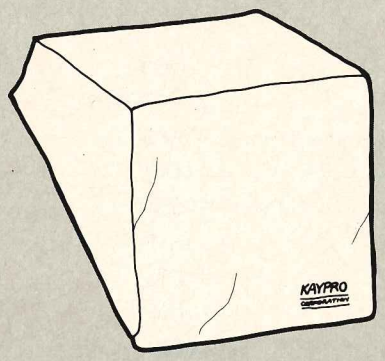

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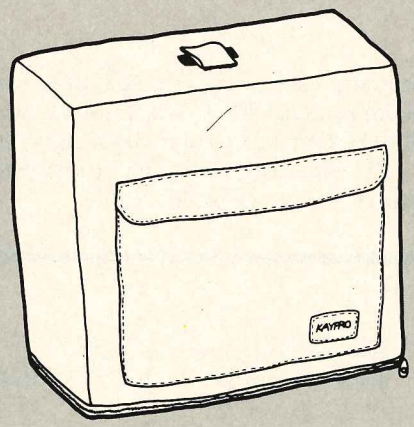

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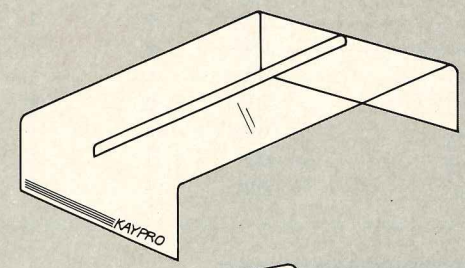

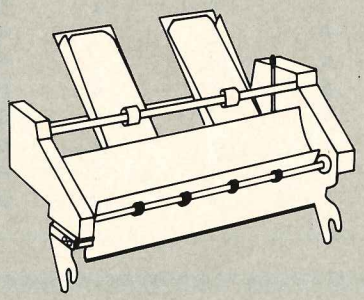

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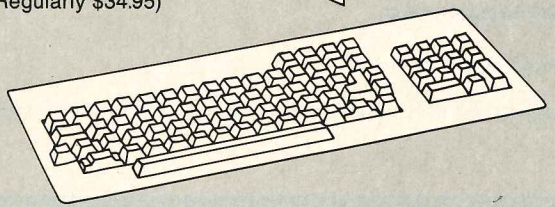

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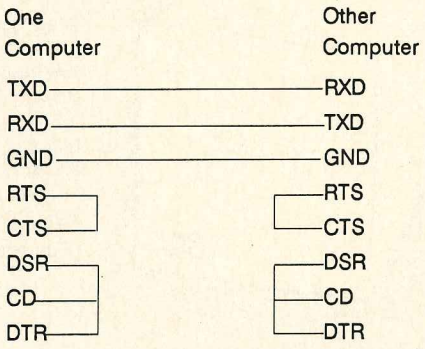
CONTINUED FROM PAGE 26

The other thing to remember is that one computer's "transmit" has to be the other computer's "receive." If we directly connected the two "transmit" signals, we'd have the digital equivalent of cocktail party chatter—both would be talking, but neither would be listening.

Given all this, we can come up with this conceptual model of a null-modem cable:



To get from this conceptual model to a working cable, we look in the User's Guide for each machine. There will be pin-out charts for the serial port. Chart #1 shows which signal is assigned to which pin— TXD, for instance, might be assigned to pin 2. With that information, we can build a cable.

How does this work in practice? Let's assume I want to connect a Kaypro 2000 to a Kaypro PC. I've got a DB-25S for the 2000 and a DB-9S for the PC. I'll use a yard of four-conductor telephone cable—the wires are green, red, black, and yellow.

Since I need only three conductors, I'll ignore the yellow wire. I will need six short pieces of wire, each about an inch long, for shorting pins on the connector.

I check the pin-out chart in my User's Guide for the 2000. Pin 2 is TXD, so I pick the green wire and solder it to pin 2 on the back of the DB-25S. (There are numbers embossed there to guide you, although you may have to squint to see them.)

Pin 3 is RXD, and it gets the red wire. The black wire goes to Pin 7, signal ground. With short pieces of wire, I connect CTS and RTS—pins 4 and 5. I also connect DSR, DTR, and CD—pins 6, 8, and 20.

Over at the PC end of the cable, I know the green wire comes from TXD on the 2000 end, so I must connect it to RXD on the PC end. According to the pin-out chart in the manual, that's pin 2 on the DB-9S. The red has the 2000's RXD, so it goes to TXD on this end—pin 3. The black signal ground is pin 5 here.

Now I link CTS to RTS—pins 7 and 8. Ditto for CD, DSR, and DTR—pins 1, 6, and 4. This little trick makes each end of the line think that the other end is ready and waiting so that the file transfer can take place entirely under software control. Before putting the hoods on these connectors, I check my work with an ohmmeter or continuity tester. Then it's time to plug the cable in; the physical connection is in place.

COMPUTER CONNECTIONS

One Computer						Other Computer				
Computer	Kaypro CP/M	Kaypro PC (Early)	Kaypro PC 286i,386	Kaypro 2000	RS-232C	RS-232C	Kaypro PC 286	Kaypro PC (Early	Kaypro 2000	Kaypro CP/M
Connector Needed	DB-25P	DB-9P	DB-9S	DB-25S	One Computer	Other Computer	386 DB-9S	DB-9P	DB-25S	DB-25P
Pin Numbers	2	2	3	2	TXD	RXD	2	4	3	3
	3	4	2	3	RXD	TXD	3	2	2	2
	7	5	5	7	GND	GND	5	5	7	7
	4	8	7	4	RTS	RTS	7	8	4	4
	5	3	8	5	CTS	CTS	8	3	5	5
	6	1	6	6	DSR	DSR	6	1	6	6
	8	7	1	8	CD	CD	1	7	8	8
	20	6	4	20	DTR	DTR	4	6	20	20

Other machines: The configuration for the Kaypro PC, 286i and 386 also works on the IBM PC/AT and most of its clones.

The Kaypro-2000 configuration also applies for most other MS-DOS laptop computers, as well many IBM PC, XT's, and clones.

The configuration for Kaypro CP/M computers works for most notebook computers, such as the Tandy 100 and 102, the NEC 8201, the Kyotronic 85, and most other computers with a female DB-25 as their serial port.

THE SOFTWARE CONNECTION

Unlike people at a bus stop, computers don't just strike up conversations with each other. They both have to be running communications software.

MITE was often part of the Kaypro software bundle for both CP/M and MS-DOS machines, so you're likely to have it at hand. That's why I'll assume both machines are running MITE, although you can use almost any communications program—each machine can be running a different one.

Both machines must use the same communication parameters. You set the parameters by entering **P** at MITE's main menu, and you set both machines to 8 data bits, no parity, 1 stop bit, and full duplex. Both machines must be running at the same baud rate; you may be able to go as fast as 19,200 baud if the hardware will permit it. Mode should be set to Originate on one machine and to Answer on the other—it doesn't matter which does which.

Now, get back to the Main menu, and then over to the Options menu. Near the bottom of that is option D—Direct Connect Mode. Make sure that's ON on both machines.

You're almost ready for the exciting moment. (Well, perhaps it's not really that exciting, but I still feel a pleasant thrill every time I make the connection and see something I typed on one computer appear on another's screen.)

From the Main Menu of both MITEs, hit G for Go on-line. As soon as you've done that, whatever you type on either keyboard should appear on both screens. If it does, you're entitled to jump up and drag someone over to the machines while shouting, "Look, look, they're talking to each other!"

And if the machines aren't communicating, see the related article (on page 32) on trouble-shooting.

TRANSFERRING THE FILES

Once you've established a solid connection, you need to put it to work, moving files from one machine to another.

Assuming, again, that you're using MITE on both machines, the easiest way to transfer a file is to go to "Binary File Xfer" from the Main Menu. The default protocol is "Xmodem," which will work fine here. Tell one machine to Send and the other to Receive. You'll be prompted for file names; supply them, and your data will migrate through the cable.

MITE gives you a choice of many other protocols; some will let you send whole batches of files with one command.

But there is an easier way if you have a Kaypro MS-DOS machine at each end of the cable. These computers come with utilities called "KCOPY" and "CATCH."

After making sure the machines are properly connected, load CATCH on the machine that's supposed to receive files. On the sending machine, load KCOPY. Its commands are fairly self-explanatory—use F7 to get to the disk or subdirectory with the files you want to send. Use other function keys to mark the

CONTINUED ON PAGE 30

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7266 SPELL: Version 2.0. Excellent spelling checker; comes w/a 40,000 word dictionary. Has a Wordstar Spellstar output.	**204 Arcade Games:** KONG, 3-D Pacman, Pango, Bricks. (Color monitor required)
7000 NEW ADVENTURE: Enter into the Colossal Cave to find fortunes of treasures and gold.	**322/348 GT POWERCOM 12.2:** ANSI Standard terminal emulation, compatible with super-micro computers, Capture Mode, limited only by available disk space, Xmodem/CRC and Ymodem/CRC protocols, Kermit file transfer protocol, and an interactive script language to automate many repetitive tasks. (2 disks)
7080 ELECTRIC EASEL: High powered; w/block commands and printer (Epson or Gemini) capabilities.	**501 PC-Calc:** Spreadsheet has up to 26 columns and 255 rows.
7023 SMALL C COMPILER: Version 2.0. Expanded version of Ron Cains Small C. Includes sample programs.	**757 Cartoons XXX:** X-rated cartoons. ADULTS Only! Must be 21 yrs. or older. (Requires Color Graphics Adapter)
7068 COBOL: Compiles to interpreted code. Includes interpreter and full documentation.	**829 Diversified Accounting Package:** With dBASE III source (requires dBASE III): Enter the employee's time sheet, enter the supplier's bills, update the cost base, pay salaries, pay bills, enter incoming monies and more functions.
7377 GFONT : Prints text on a printer using the high resolution graphics mode. Works on Epson and Gemini printers.	**901&944 PC-FILE+ V1.0:** User friendly filing system now features online help, math functions, & the ability to customize the Data Base to fityour personal needs. (2 disks)
7227-7230 THE BIBLE: The New Testament. King James version. Requires dual floppy drives or hard drive. **(4 disk set. Must order all disks)**	**1305 The Boss:** Helps implement Pop-up windows, pull down menus, status lines and in context on-line help. Also allows you to drag windows around the screen and automatically sense the video card installed. (Requires lattice C, Microsoft C or Computer Innovations C186 compiler)
7231-7242 THE BIBLE: The Old Testament. King James version. Requires dual floppy drives or hard drive. **(8 disk set. Must order all disks)**	**1712 Mail Master:** Enter names, addresses, etc. Information may be searched, sorted, & printed.
7062 MAGIKEY+: A key redefinition program; allows you to create and keep key definition files.	
7400-7401 UNIX TOOLS : Cat, col, crypt, find, grep, merge, paste, pr, sort, uniq, and more. Comes with very complete documentation. **(2 disk set. Must order both disks).**	
7090 ZCPR: Will work on all KAYPROS that operate under CP/M.	
All disks are Kaypro II format Other formats available for $7.99	

*(Minimum order of 5) **To Order Call:**

800-992-1992 (Nat'l)

800-992-1993 (CA)

619-942-9998 (Foreign)

CONTINUED FROM PAGE 29

files to be sent. Then hit F8. The protocols and speeds are set automatically, and KCOPY will even transfer directory structures.

There isn't room here for a full explanation of communications protocols and programs, which could easily fill several magazines. Once you've made the connection, feel free to experiment—it's not as though you're paying expensive connect-time or long-distance charges.

ALL KINDS OF FILES

In the world of serial communications, there are "text" files and "binary" files. A Text file is a specialized kind of binary file, so any method that transfers binary files will work for text. Further, WordStar files, which we often think of as text files, are really binary files.

In all its versions, WordStar uses the same internal codes for storing information. This means that you can take a file prepared with WordStar 3.3 on a CP/M Kaypro, transfer it over a serial cable, and edit it with WordStar 4.0 on an MS-DOS Kaypro.

The same applies for data files and BASIC programs. For example, a dBASE II "DBF" file from a CP/M machine will work fine with the MS-DOS version of dBASE II. If you've saved your MBASIC-80 programs as ASCII files (SAVE "PROGRAM",A) on your CP/M machine, they will generally run with minor—or even no—modification under GWBASIC on your MS-DOS Kaypro.

With binary file transfer protocols, the software sends data in blocks and checks each block for transmission errors. If it finds one, the block is transmitted again, until they get it right.

This means you can transfer programs from one machine to another. Of course a CP/M "COM" file won't run on an MS-DOS machine, and vice-versa. But if you have a program that runs on your PC, chances are it will also run on a 2000, and you can get it there through a serial link. Here, though, you need to check your software license to see if it allows you to transfer a program from one machine to another.

THE BOTTOM LINE

Connecting computers isn't nearly as easy as plugging in a toaster or a telephone, although there's really no reason the process couldn't be almost that simple.

If you're willing to spend more than the $10 or so that the hardware for a null-modem cable costs, there are some easier ways to do the job. They're also worth considering if you have specific needs and a lot of data to move.

To transfer files from CP/M disks to MS-DOS disks and vice-versa, look into programs like Media Master and Uniform. With one of those, you can copy the contents of a CP/M-formatted disk in drive A to a disk in drive B formatted for MS-DOS.

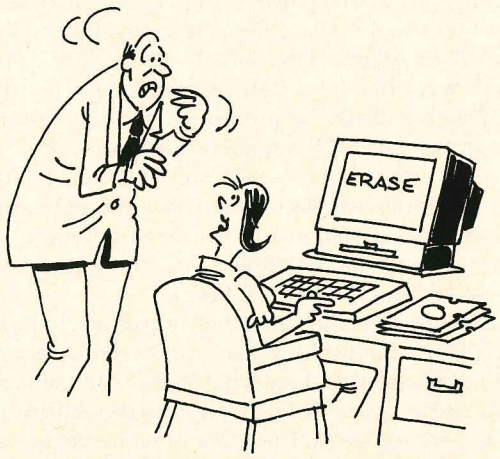
If you have both a Kaypro 2000, which uses 3 1/2-inch disks, and a Kaypro PC, with 5 1/4-inch disks, you might want to add a 3 1/2-inch disk drive to your PC. Another method of connecting MS-DOS machines is a recent product called "The Brooklyn Bridge," which supposedly makes transfers almost as painless as using the MS-DOS "COPY" command.

If you have two MS-DOS machines, use KCOPY and CATCH - KCOPY even transfers directory structures.

To draw an analogy, these methods are like driving or flying—they get you there quickly with a minimum of effort, but at a considerable expense.

Stringing a null-modem cable between serial ports is more like riding a bicycle. It can be frustrating at first. But the speed is quite acceptable if you don't have too many files to move at once, the price is hard to beat and it certainly gets the job done.

Ed Quillen is a Salida, Colorado-based freelance writer who enjoys programming in his spare time.



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Computer Professionals, Inc. has been developing computer applications for business and industry for TWENTY years, often working behind the scenes for some of the biggest names in the industry. We have learned how to pack a lot of power into each computer program but we know that raw power and ability is worth little unless coupled with ease of use, good documentation and responsive support. CPI's Business Systems are all these things and more. They run faster, support larger capacities and cost less than any similar systems marketed today. They have been installed by thousands of users (since 1978) and are available from us directly or from your KAYPRO dealer. We specialize in KAYPRO systems.

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Super system with Invoices, Service Invoices, Statements, etc. A full range of reporting abilities include Customer Reports, Ageing Reports, Transactions Reports, G/L Transaction List, etc. Auto billing feature eliminates mistakes. Sales can be distributed to 100 accounts. Build up statement option combines the virtues of ledger card history detail and the speeds of today's computers. Use preprinted forms and/or plain paper for invoices and statements.
CAPACITIES of 600 Customers (CP/M) 2000 (MS-DOS) - no limit on transactions, multiple customer disks OK.

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$100.00 CP/M — $100.00 MS-DOS

A complete payroll system supplied with current tax routines for every state. Multiple pay rates, multiple overtime rates, multiple other pay rates, eight user deductions (each can be an amount, a rate or %), deductions may be taken before or after taxes. Commissions, tips, tips considered as wages, earned income credit, SUI, SDI, etc. are all included. In short it's a very comprehensive payroll system but one which is very easy to use. Its functions include Employee File Maintenance; Employee Lists in multiple levels of detail; Input Worksheets; Time Card Entry; Regular, Overtime, Other, Commissions, Tips, Misc. Pay. Exception Processing is the rule so you need only enter variable data. Manual checks are processed quickly and easily. Weekly, Bi-Weekly, Semi-Monthly, Monthly pay cycles (run individually or combined); Departmental Payrolls; Checks; Check Registers; Deduction Registers; Earnings Reports; 941's; W-2's; Unemployment Reports; Multi-state; Manual Checks; G/L interface for Federal, FICA, State and Local Taxes, Federal/State Add-Ons, FICA, FUTA, SUI, SDI, EIC, 8 user deductions.
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$100.00 CP/M — $100.00 MS-DOS

Improve your cash management with this fine system. You'll get the up to date accurate picture of accounts to be paid, cash requirements for the data on file. Payments and notes vouchered automatically insuring timely payments. Complete check writing included. The system reports include Vendor File Lists, Open Vouchers, Ageing By Due Date, Discount Date Ageing, Cash Requirements, Check Registers, G/L Transaction List, Query Vendor Status, Credit Vouchers, Deleted Vouchers.
CAPACITIES of 600 Vendors, (CP/M), 2000 Vendors (MS-DOS) - no limit on transactions.

HARDWARE REQUIREMENTS

CP/M:	64K (53K TPA) & CP/M 2.0 or higher.
MS-DOS:	128K (or more) & MS-DOS/PC-DOS 2.0 or higher - ANSI.SYS.
Printer:	132 columns (compressed pitch supported), continuous forms.
Disk/s:	Dual Floppies/Hard Disk/Both - 191K recommended, less works.
CRT:	80/24 with Clear, Home, Clear to EOL, Up, Down, Left, Right.

CURRENT UPDATE: **NEW A/R STSTEM FOR CP/M AND MS-DOS USERS NOW SHIPPING. NEW FEATURES INCLUDE 4 LINE NAME AND ADDRESS, FINANCE CHARGES, VARIABLE AGEING, DESCRIPTIVE BILLING, ASCII OUTPUT FILES, MULTI-CLIENT PROCESSING. MANY NEW REPORTS, ITEM INVOICE FORMATS, SERVICE INVOICE FORMATS, STATEMENT FORMATS, ETC. FOR PLAIN PAPER AND MANY POPULAR PRE-PRINTED FORMS. TAXABLE AND NON-TAXABLE ITEMS ON SAME INVOICE. FLASH REPORTING TO SCREEN OR PRINTER; MORE . . .**

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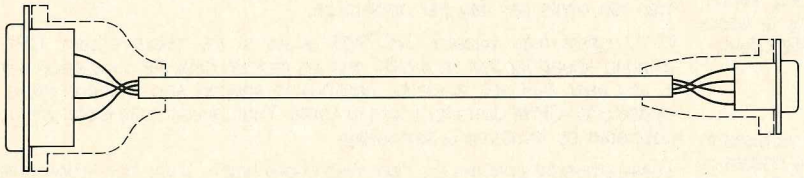
TROUBLE-SHOOTING YOUR CONNECTION



Serial connections between computers often serve as a practical example of Murphy's Law: If anything can go wrong, it will. There are many ways that things can go wrong, but if you can find the problem, it's generally easy to fix.

There's nothing you can do with a null-modem cable that will damage your computer. The worst problem you're likely to encounter comes when you have communications software loaded in both machines, the cable is in place, and yet absolutely nothing moves between the computers.

CHECK THE CABLE

Are you sure about your cable? Did you check it with an ohmmeter or continuity tester to be sure that Pin 5 on one end connects to Pin 7 on the other (or whatever the case may be?) And that the pins that are supposed to be shorted together *are* shorted together? And that pins that aren't supposed to be connected are, in fact, not connected? Even if you bought the cable, or had someone else make it, check it—everybody makes mistakes.

And is the cable plugged in securely at both ends?

THEN CHECK THE SOFTWARE

Once you are satisfied that your null-modem cable is wired correctly and installed securely, check your software.

Are both machines running a communications program, set in the "on-line" or "terminal" mode? If both are, and your cable is performing properly, generally something will happen on one machine's screen when you press a key on the other's keyboard.

What you see may not be what you want, though. Here are some common software problems.

- What you type on one machine shows up on the other's screen, but not its own. This can happen if both programs are set to Originate mode. Change one of them to Answer mode. It can also happen if the machine you're typing on is at full duplex and the other is on half duplex. Make sure both are on full duplex.
- What you type on one machine is constantly sent to the other, and it quickly fills both screens. Both machines in Answer mode. Set one of them to Originate.
- Garbage characters on both screens. Generally, this means your machines are running at different baud rates (or, more accurately, different bits-per-second rates). Make sure both machines are set to the same baud rate.
- One screen shows characters correctly. The other shows some characters correctly, but garbage characters for others. This means one is running at 7 bits with either even or odd parity, and the other at 8 bits with no parity. Set both to 8 and no parity.
- One screen shows characters correctly. The other shows garbage for everything. The machines are set to different parities (one is 7 even and the other 7 odd), or one is set to 7 data bits and the other to 8. Make sure they both agree.

MASTERING SERIAL LINKS

If you run into trouble, the first place to ask questions is at your local users' group. Somebody there may well have already figured it out. One book is outstanding at explaining the intricacies of serial communication clearly and simply. If you want to know more about everything from parity bits to CompuServe, get *The Complete Handbook of Personal Computer Communications: Everything You Need to Go Online With the World*, by Alfred Glossbrenner, from St. Martin's Press (ISBN 0-312-15718-5).

Detailed technical information about the RS-232C interface can be found at the back of your MITE manual.

One handy tool for connecting computers is a "break-out box." It shows you which lines are active, and allows you to turn lines on and off. You can also use jumper wires to switch connections, which allows you to experiment until you figure out the proper cable configuration. Then you can assemble a cable accordingly.

HOLIDAY
GIFT GUIDE

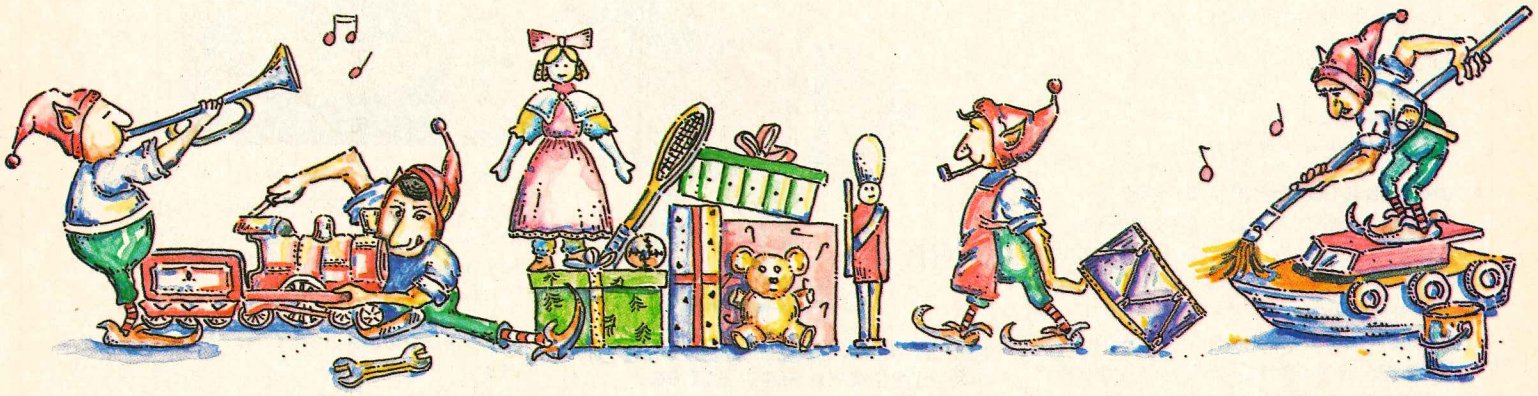


ILLUSTRATION BY PETER E. HORJUS

Having trouble deciding what gift to buy for that special friend or family member? Well, if he or she is a Kaypro user, we've got plenty of suggestions. On the following pages, PROFILES presents its fourth annual Holiday Gift Guide. All listings state whether they will work on CP/M, MS-DOS, or both. We strongly recommend that you contact each vendor before ordering to verify prices and to check on shipping and handling charges, product availability, and disk formats. AND many vendors are offering special discounts for PROFILES readers, so be sure to check the coupon pages before you buy.

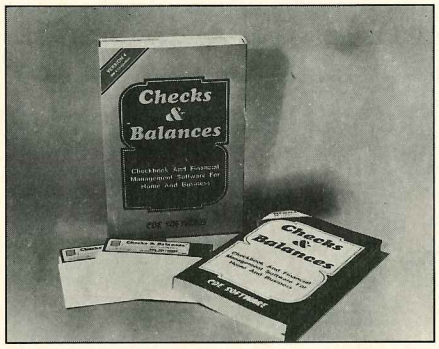
SOFTWARE:

FREE FILER, $89.95 *
A free-form text search, sort and retrieval program that lets you access your entire collection of word processing-generated files as a text database, without "indexing" or modifying original files. The program can retrieve sections containing specified words or word combinations from your documents. CP/M, MS-DOS.

Telion Software
213-946-1015
P.O. Box 1464
La Mirada, CA 90637-1464

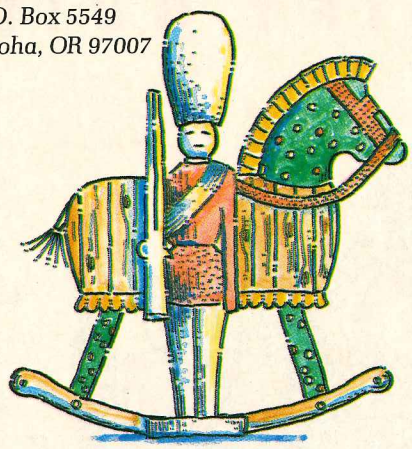
CHECKS & BALANCES, $74.95 *
A "single-entry" accounting system that allows you to balance your checkbook, print checks, produce profit and loss statements, produce net worth statement, and flag tax-related items. Program can also track income and expenses for tax purposes with 128 user-defined categories. Free phone support for registered users. Version 4.1 now available for CP/M, MS-DOS.

CDE Software
213-661-2031
948 Tularosa Drive
Los Angeles, CA 90026



KAMAS, $69.95
An outline processor and text editor for IBM-PC and compatibles, KAMAS allows you to classify text into an outline structure and alter and access text based on that structure. Features include a full screen text editor for inserting/editing text in outline, copy and move operations, built-in file manager, date and time stamps, and password security on outline files.

KAMASOFT, Inc.
503-649-3765
P.O. Box 5549
Aloha, OR 97007



PUBLIC DOMAIN/USER SUPPORTED SOFTWARE DISK SETS, $14.95
Set of three 5-1/4" disks containing 1.5 mg of file-compressed programs. Choose from many applications, including database systems, printer utilities, accounting, education, DOS utilities, graphics, Lotus templates, and much more. Sets for CP/M and MS-DOS users.

MultiPath, Inc.
201-575-5880
Box 487
Montville, NJ 07045

MUNCH, $39.95
A menu-driven MS-DOS program for health and nutrition, MUNCH users enter their daily food intake into the program (which has foods arranged into ten food groups), and they are told how much they have consumed in carbohydrates, proteins, fats, and kilocalories. User's diet is compared with norms based on height, weight, sex, and age. Version available for athletes, as well.

C.R. Smolin, Inc.
619-454-3404
7760 Fay Avenue, Suite J
La Jolla, CA 92037

PRESTO PLUS!, $39.95 *
A CP/M "workalike" program that mimics many of the functions of the Sidekick, the popular MS-DOS program.

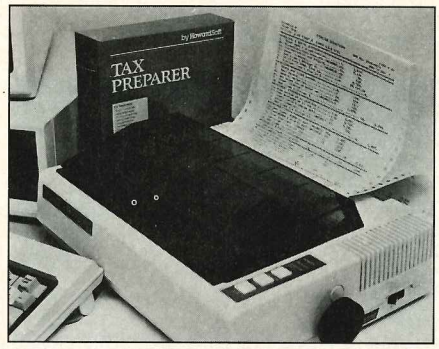
Spectre Technologies
818-716-1655
22458 Ventura Blvd., Suite E
Woodland Hills, CA 91364

COMPU/CHART 3, $299.95; WITH 1200 BAUD MODEM, $439.95
Compu/CHART 3, which includes the modem program and portfolio utility, "The Retriever," will access the Hale Systems' Dial/Data retrieval service for price data. User can track daily and weekly prices for stocks, options, indices, commodities, and over 1,300 mutual funds. MS-DOS, CP/M.

NewTEK Industries
213-874-6669
P.O. Box 46116
Los Angeles, CA 90046

TAX PREPARER, $295
With the Tax Reform Act built-in beyond 1990, Tax Preparer can produce 20 IRS-accepted tax forms. A California Supplement is available for $125. For MS-DOS computers.

HowardSoft
619-454-0121
1224 Prospect St., Suite 150
La Jolla, CA 92037



"GREAT PROGRAMS" PACKAGE, $28 *
Set includes **MailMan** list manager, **Personal Datebook** schedules, **FORTH** v 2.0, **Deadline** game, [**Documate plus**-index and builds table of contents, **Grammatick** checks grammar/syntax, **Footnote, Math*** calculator for WS2, **Spellguard**]

Public Domain Software Company
212-732-2565
33 Gold Street, L3
New York, NY 10038

SIDE2, $24.95 *
A "sideways" print utility for CP/M and MS-DOS users, Side2 provides the following features: multiple typefaces and sizes, boldfacing, variable row/column spacing, variable margins and unlimited widths. An exclusive Preview feature allows user to see what the printout will look like on the screen before printing.

Xpert Software
619-268-0112
8865 Polland Avenue
San Diego, CA 92123

TOPDOS, $69.95
This MS-DOS utility serves as a hard file and directory manager for your hard disk, and offers features such as command line editor, file finder, auto command completion, macros, and more.

FrontRunner Development Corporation
800-654-7494/in CA 818-376-1322
14656 Oxnard Street
Van Nuys, CA 91411

THEEMCEE, $69.95
TheEmcee is an intelligent menuing system for the IBM-PC and compatibles. This program automates any single/multi-user system or network by providing instant access to any program or file on a hard disk. This utility also has path finding features and multi-level password security so your private files stay private. Other features include user definable screens, online context sensitive help, menu editor, automatic screen blanking, and more.

Command Software Systems
800-423-9147/in CA 818-457-1789
28990 Pacific Coast Highway, Suite 208
Malibu, CA 90265

SIDEKICK, $84.95
This memory-resident program allows the user to open interactive windows over the current application program in use. Comes with features such as a full-function calculator, perpetual calendar, appointment scheduler, a WordStar-like notepad, an autodialer with telephone directory, and an ASCII table. For MS-DOS computers.

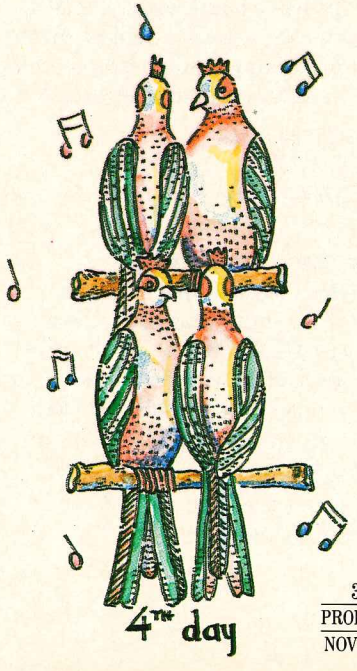
Borland International, Inc.
Scott Tiernan
408-438-8400
4585 Scotts Valley Drive
Scotts Valley, CA 95066

SPRINT, $59
This program is a Lotus 1-2-3 add-in that improves the recalculation speed of Lotus 1-2-3. It enables this popular spreadsheet to recalculate only those cells of a worksheet that have been changed since the last recalculation. For MS-DOS computers.

Biologic Company
703-368-2949
11982 Coverstone Hill Circle, Suite 1622
Manassas, VA 22110

UTILOG I, $39.95
This MS-DOS compatible program monitors the usage of your computer. Utilog I automatically starts each time the computer is turned on, then keeps track of actual usage time by monitoing the keyboard. Includes report program that displays total time used on the computer, as well as the amount of time each logged-on user has spent at the keyboard.

Benta
816-353-3765
12708 East 62nd Court
Kansas City, MO 64133



NAMER, $99
NAMER can generate millions of new, never seen before names for products, services, companies, and more. It comes with eleven different name generation methods and an electronic Naming Thesaurus containing over 10,000 name-parts in more than 500 categories. MS-DOS only.

The Salinon Corporation
214-692-9091
7430 Greenville Avenue
Dallas, TX 75231

CAREER MANAGEMENT PARTNER, $129
Contains elements needed for a productive job search, such as word processing, data bases, merge mail, telecommunications. Includes booklet on techniques, a file disk containing over 100 names/addresses of leading executive recruiters, a booklet on online prospecting, and an introductory Dow Jones News/Retrieval packet.

Scientific Systems
203-786-5236
Five Science Park
New Haven, CT 06511

***CP/M TIMES*, NO CHARGE ***
***PC TIMES*, NO CHARGE**
Central Computer Products presents *PC Times* and *CP/M Times*, informative catalogs packed with hundreds of products. Fast service by mail or phone.

Central Computer Products
800-533-8049/in CA 800-624-5628
330 Central Avenue
Fillmore, CA 93015

MY PEERS, $59.95 *
A personal productivity tool for all those who want to work well together—professional organizations, sororities, fraternities, civic organizations, user groups, clubs.

E Z Systems, Inc.
615-269-6428
P.O. Box 23910
Nashville, TN 37202

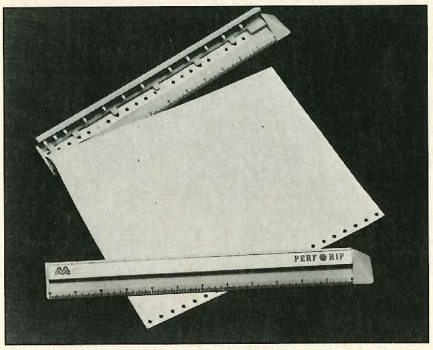
QUIZ WRITER, $47.95 *
A versatile exam writing tool for teachers and parents to test youngsters of all grade levels. Choose from several different formats, including fill in the blanks, multiple choice, true/false, matching, or even essay questions. Password protected.

Hurd Computer Systems
714-525-0879
6330 Lincoln Avenue
Cypress, CA 90630

HARDWARE/ ACCESSORIES:

PERF-O-RIP, $9.95
Perf-O-Rip is a tool that cleanly and easily removes perforated edges from continuous-feed fan-fold computer paper. Available through retail computer shops.

American Mold Company
305-974-8701
2200 N.W. 32 Street, Suite 100
Pompano Beach, FL 33069



MULTICOLOR MAC INKER, $80
This automatic ribbon re-inker for multicolor ribbons consists of a motorized base and adaptor which fits into the advancing mechanism of the cartridge. Individual dispensers release ink specifically and only to the appropriate colored band.

Computer Friends
503-626-2291
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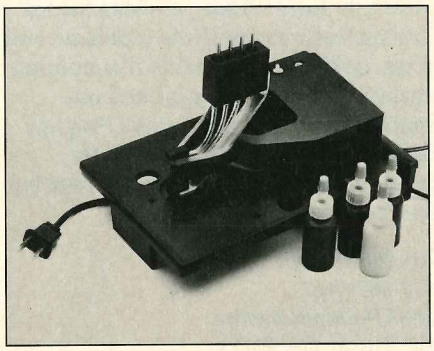

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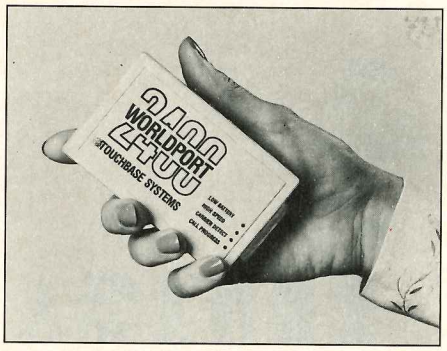

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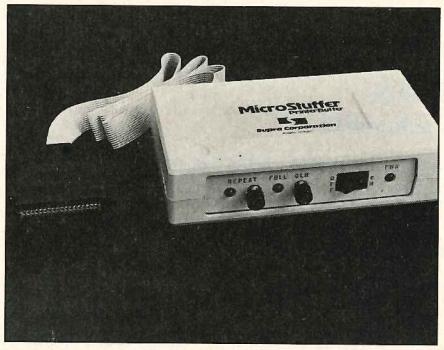

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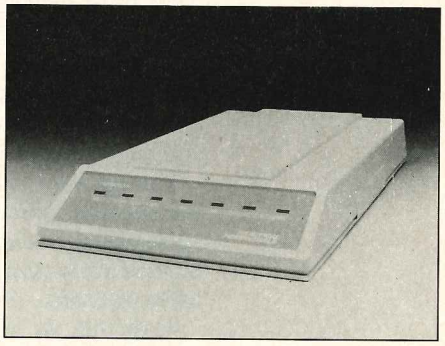

PROFIT PLAN

BY WALLY HODGE, YOSHIKO MURDICK, AND WILLIAM MURDICK

ILLUSTRATION BY STACY KRIKORIAN

This article is for Kaypro owners who received ProfitPlan bundled with their computers, but who have never used a spreadsheet program, have no idea what a spreadsheet is for, and are certain they have no use for one.

Though owners of small businesses will find the following information useful, it's not intended to help them try out spreadsheet analysis for the first time. Our focus here will be on how other people—the rest of us—can use a spreadsheet to solve problems unrelated to the business world.

To do this, we will first provide a basic "get started" tutorial on ProfitPlan, using a simplified home budget as a model, to demonstrate how easy it is to use the program.

A spreadsheet for the rest of us.

THE TUTORIAL

Make an operating copy of ProfitPlan and put it in drive A, and put a blank, formatted disk in drive B. To load ProfitPlan, at the A0> prompt type **PLAN** and hit **RETURN** (from here on, the RETURN key will be designated by <**RETURN**>). Go ahead and do that on your Kaypro, and then follow the steps below.

Step 1. You should be looking at the ProfitPlan "table" displaying 17 numbered rows and 5 columns of zeros. This merely represents what can be seen on the screen at one time. You can use up to 20 columns and 50 rows in the default working table. Off to the right of the table is a list of 20 numbered commands, all your monitor can display at one time. Actually, there are over 100 commands at your disposal (they're listed in the back of your manual). To do something

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with ProfitPlan, you enter a command by typing its number.

To begin to set up our practice budget, we first want to enter the names, or "titles," of the various incomes and payouts. These will go along the left side of the screen, each one next to a ROW number, as in Figure 1. To enter titles, we use the "ROW TITLE" command, which happens to be command #20 (see bottom right corner of your monitor).

Type **20 <RETURN>** (if you make an error, erase with DEL or BACKSPACE).

```
 B:PRACTICE                    MODE=NORMAL   ORDER=R/C  ROW=1-25  COL=1-13
     ROW 1 (BEGINNING BALANCE) <--
ENTER COMMAND:

                                                                  1 format:
ROW                          JAN 87    FEB 87    MAR 87    APR 87  2 data:
-------------------------- ----1---- ----2---- ----3---- ----4----  3 math:
>1 BEGINNING BALANCE            640       481       821       662  4 finance:
 2 PAYCHECK                   1,211     1,211     1,211     1,211  5 print:
 3 OTHER INCOME                                                    6 status:
 4 TOTAL                      1,851     2,191     2,032     1,872  7 HELP
 5                                0         0         0         0  8
 6 UNCONTROLLABLE                 0         0         0         0  9 STOP
 7 EXPENDITURES:                  0         0         0         0  10 utility:
 8   RENT                       275       275       275       275  11 program:
 9   UTILITIES                   80        80        80        80  12 stats:
10   AUTO LOAN                                                     13 tables:
11 TOTAL                        600       600       600       600  14 link:
12                               0         0         0         0  15
13 CONTROLLABLE                  0         0         0         0  16 format:
14 EXPENDITURES:                 0         0         0         0  17 INSERT
15   GROCERIES                 150       150       150       100  18 DELETE
16   CIGARETTES                120       120       120       120  19   rows:
17   ENTERTAINMENT             400       400       400       400  20 ROW TITLE
```

Step 2. We now wish to enter the first title. Look at Figure 1, which shows a portion of the model budget for this tutorial. The first title is "BEGINNING BALANCE." The beginning balance is the amount of money you have at the beginning of each month. It's customary to use upper-case letters, so hit your CAPS LOCK key and type **BEGINNING BALANCE <RETURN>**.

Step 3. Notice that there was not enough room for the whole title. At printing time, ProfitPlan would print your complete title, and if you wished, you could simply ignore the truncation at this point and proceed. However, most people want to see their whole titles, so let's widen the ROW TITLE column. To do this hit **ESC** and type **86 <RETURN>**.

Step 4. Hitting ESC (your manual calls the ESC key the "cancel key") released you from command #20 (for entering ROW TITLES) and returned you to the ENTER COMMAND prompt, allowing you to enter the command for setting the "CRT parameters" for onscreen viewing (command #86). Your CRT (cathode ray tube) is your computer's TV screen. Command #86 asks four questions, which you will now answer. The first one is the number of decimal places for the amounts of money you will be entering. The default (that is, the original set-up) is 1 (notice that above the cursor the screen says "CURRENT = 1"). Since you will be rounding off to the nearest dollar in any home budget, you don't need any decimals, so type **0 <RETURN>**. Go ahead and do that now.

The next option that appears in front of the cursor is the one we originally talked about, ROW TITLE WIDTH. Since the longest title we will use for this table will contain 18 characters, and since ProfitPlan needs three for the ROW number, you need a width of 21. However, ProfitPlan requires increments of 10, starting from the default of 15 characters. So type **25 <RETURN>**.

The next option is for column width. For this exercise, just hit **<RETURN>** to accept the default of 10.

Having hit <RETURN>, you should now see the option for displaying 0 values (do you want to see blanks or zeros in the empty columns?). Again, hit **<RETURN>** to accept the default of zeros.

Step 5. To continue to add row titles, type **20 <RETURN>**. Hit the down arrow key to avoid overwriting the first title (notice that the > data pointer is next to ROW 1; you want it next to ROW 2). The arrow keys control which row will receive the text you enter at the top of the screen. At any time you can correct an error by using the arrow key to put the > pointer next to the appropriate ROW number and then overwriting the misspelled title. You can erase a title by overwriting with blank spaces entered with the space bar.

Now begin entering titles.

Type **PAYCHECK <RETURN>**
Type **OTHER INCOME <RETURN>**
Type **TOTAL <RETURN>**

Since table size is not a problem in this example, hit **<RETURN>** again to leave a blank line between incomes and outgoes. (If your table size were approaching the maximum allowable, you would enter blank lines during printing only.)

Type **UNCONTROLLABLE <RETURN>**
Type **EXPENDITURES: <RETURN>**

Indent the next entries below by hitting the space bar twice before typing the title.

Type **RENT <RETURN>**
Type **UTILITIES <RETURN>**
Type **AUTO LOAN <RETURN>**

(Note: End indentation.)

Type **TOTAL <RETURN> <RETURN>**
At ROW 13, type **CONTROLLABLE <RETURN>**
Type **EXPENDITURES: <RETURN>**

Use the space bar again to give two-space indentations for the entries below.

Type **GROCERIES <RETURN>**
Type **CIGARETTES <RETURN>**
Type **ENTERTAINMENT <RETURN>**
Type **MISCELLANEOUS <RETURN>**
Without indentation, type **TOTAL <RETURN> <RETURN>**
Type **TOTAL EXPENDITURES <RETURN> <RETURN>**
Type **FINAL BALANCE <RETURN>**

Step 6. Next we need column titles. First hit **ESC** to get out from under the ROW TITLE command and return to the ENTER COMMAND prompt. Then enter command #25, the COL TITLE command, by typing **25 <RETURN>**. CONTINUED ON PAGE 42

CONTINUED FROM PAGE 41

Step 7. Column titles can have one or two tiers. We will use one, rejecting the second tier by hitting **<RETURN>**.

Type **JAN 87 <RETURN> <RETURN>**
Type **FEB 87 <RETURN> <RETURN>**

Continue through DEC 87. Use the left and right arrow keys to set up overwriting if you make an error. After you finish, delay hitting ESC until you have done the next step.

Step 8. Before hitting ESC to return to the command prompt, enter one more column title after DEC 87: type **TOTAL <RETURN> <RETURN>** (this should be over column 13). Then hit **ESC** to wrap up the column title entry process.

Step 9. You may not want to take a rest, but let's save and exit anyway, so you can learn that process. Type **112**, the save command. You will be asked for a table name; call this one "b:practice." (The second time you save, you will be asked to verify that you wish to overwrite the earlier version; type Y for "yes.") You can later load the table either by typing **PLAN B:PRACTICE** at the A0> prompt or by first loading PLAN.COM and then using #111, the load table command. If you want more than one copy of a table, you can save the table many times using different file names.

After saving, exit by typing **9** followed by **Y**.

Step 10. Time to enter numbers. Re-load your table following the directions above (don't forget to type B: in front of the table name). Make sure that the pointer is in ROW 1.

In real life, the numbers you are about to enter would be last year's figures (from whatever records you kept or whatever backward guesses you can now make) modified by your best estimate of changes to occur during the forthcoming year. In a computerized budget, your predictions gradually become more and more accurate as the year progresses. And once you start keeping track of things, your initial annual predictions become more and more accurate. It may feel strange to be typing in the future, but remember—the second half of the word ProfitPlan is "plan," indicating that a major purpose of such record keeping is to see the future. The prescience of a spreadsheet can be startling, which is one of the reasons this device has become so popular. We will later show you a practical application of the predicting ability of ProfitPlan.

The prescience of spreadsheets can be startling, which is one reason they are so popular.

To continue with the tutorial, enter the figures we give you for the practice budget. First make sure you have the ENTER COMMAND prompt. Then type **30 <RETURN>**.

Step 11. You just entered the ENTRY command, which allows you to start overwriting all those zeros. Notice that the > pointer is aimed at the first column (JAN 87) and the first row (BEGINNING BALANCE). In the parlance of spreadsheets, you are at the position known as "ROW 1, COL 1." Let's enter your BEGINNING BALANCE. Since you're a young bachelor(ette) just starting out at your new job, we'll assume that you have $640 to your name.

Type **640 <RETURN>**

Step 12. The prompt is now next to ROW 1, COL 2. You can see it there, and the second line at the top of the monitor *tells you* what row and column will receive the next data. However, we now wish to enter an amount for ROW 2, COL 1; in other words, we want to enter data moving down the first column instead of horizontally across the screen. In such a case, normally you would simply use the arrow keys to adjust the pointer. However, this time don't do that. Instead, in a moment you will hit the ESC key to change ENTRY commands.

Let's assume that your monthly paycheck is $1,210.56. Do not type in that amount of money. Since that amount will not change during the year (at least as far as you know), we will use another ENTRY command (#31) to enter this amount for every month throughout the year.

Hit **ESC**. Then type **31 <RETURN>**

Step 13. Command 31 enters an amount for all 20 columns in the table, but that's not a problem; we simply ignore anything beyond COL 13.

The pointer should be on ROW 2 in the TITLE column. If not, put it there using the arrow keys. You are now asked to choose from a list of possible ways to enter data "across the board" horizontally. For example, if you chose 2, "GROW," you could have your amount increase by a certain percentage each month and thereby make predictions or perceive the effects of gradual growth in an expenditure or income. We will use option 1, "CONSTANT," because we want the same number entered for each month. (For the time being, forget about column 13, "TOTAL"; we'll attend to that later.)

Type **1 <RETURN>**
Type **1210.56 <RETURN>** (don't put a comma between 1 and 2).

Step 14. Notice that ProfitPlan rounded off the salary to the nearest dollar.

The pointer should be on ROW 3. Now, let's enter some figures for the general category "OTHER INCOME." Since your birthday is in February and your mother always gives you $500, we need to enter that. Also, you expect to get back about $200 in an income tax refund in May. During the summer months, you hope to make an extra $300 a month teaching Kendo at the local YWCA.

Type **30 <RETURN>**

Step 15. Tap the right arrow key so that the pointer is pointing toward the 0 under February.

Type **500 <RETURN>**

Step 16. Continue the process, entering 200 under MAY and 300 under JUN, JUL, and AUG.

Step 17. We now want to jump to COL 1, ROW 4 in order to handle the totals for incomes. You could do this by hitting the arrow keys, but there is an easier way: command #36 allows you to jump to any specific row/column location.

Hit **ESC** to get the ENTER COMMAND prompt; then type **36 <RETURN>**, followed by **4 <RETURN>**, followed by **1 <RETURN>**.

Step 18. You may have noticed that "GOTO" was the name of command #36. For some commands, such as this one, you can type a letter instead of the number. In this case, typing **G** will do the same thing as **36 <RETURN>**, and might be more memorable.

For the total, we will enter the mathematical operation of addition, instead of a number. Type either **55 <RETURN>** or **S** (for "sum").

Step 20. ProfitPlan needs to know which rows you want to sum. It begins by asking you which row to begin summing. We wish to begin with BEGINNING BALANCE, so type **1 <RETURN>**.

Then, to indicate the last row to be added, type **3 <RETURN>**.

Step 21. To view what has happened, type **G** followed by two 1's to return the marker to ROW 1, COL 1. Don't be alarmed if the addition seems to be off by a dollar here and there; ProfitPlan has kept track of the pennies entered for your paycheck, and after adding the original amounts, not the rounded off figures, has rounded off again.

Tap the down arrow key to put the pointer on ROW 8, "RENT." Then use command 31 to enter a CONSTANT value of $275. (Of course, you won't type in the dollar sign; 275 will be the "BASE VALUE.")

Step 22. For simplicity, let's assume that you have your utilities on a budget plan that allows for a single consistant monthly payment of $80. Your auto payment of $243 will also be a constant. Use command 31 to enter these values across the board.

Then use the S command to sum rows 8 to 10.

Step 23. We made a mistake. The auto loan payment is actually 245, not 243. Make the change by putting the cursor on ROW 10 and using command 31 to overwrite the CONSTANT value.

Having done so, notice that the TOTAL hasn't changed, even though one of the figures in the addition is now different by $2. To re-compute the total, enter the command **98**.

CONTINUED ON PAGE 44

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CONTINUED FROM PAGE 43

Step 24. Now to the controllable expenditures. Make your groceries $150 per month, except for NOV, when you spend an extra $50 for Thanksgiving, and also excepting APR and MAY, when you spend only $100 because you are dieting in order to fit into your Kendo armor. You can use 31 to enter 150 everywhere, and then edit the deviating months using command 32, which allows you to enter (in this case, overwrite) figures at any location, prompting you for the ROW, COL, and value.

As a heavy smoker, you puff away $120 per month. That's a command 31 constant.

In regard to entertainment, your new paramour has little income but expensive tastes, which you anticipate will cost you about $400 per month in dating expenses.

Throw in $100 for miscellaneous expenses, such as gasoline, clothes, toiletries, PROFILES subscription, etc.

At the TOTAL row beginning, use the S (sum) command to add rows 15 through 18.

Step 25. The moment of truth is approaching. You will soon find out if you can afford those expensive dates and the luxury of chain smoking. Move the pointer down to ROW 21, next to TOTAL EXPENDITURES.

This is not a sum of consecutive rows; instead you want to add rows 11 and 19, the two totals for expenditures (controllable and uncontrollable). Enter the formula command by typing either **35 <RETURN>** or **F**.

Using the symbol "L" for "reference to either a row or column," enter the formula **L11+L19 <RETURN>**.

Step 26. Put the pointer on ROW 23, BALANCE. To get the total income minus total expenditures, the BALANCE, enter the F command followed by **L4-L21 <RETURN>**.

Step 27. We now want to set things up so that the BALANCE figure at the bottom of COL 1 (JAN) becomes the BEGINNING BALANCE at the top of COL 2 (FEB). Likewise, we want all the rest of the BEGINNING BALANCES for the other months to be equal to the final BALANCES of the previous months.

To do this, use the PLUG command, #37, to "plug" the appropriate value in the desired location. First, enter **37 <RETURN>** and then the coordinates of the desired location (ROW 1, COL 2; enter **1 <RETURN>** followed by **2 <RETURN>**). You should now see a colon prompt; ProfitPlan is awaiting the value to be plugged at the indicated location. Type **V23,1 <RETURN>**.

"V" stands for "value," and the numbers are the coordinates of the previous month's final BALANCE.

After each plugging, enter command **98** to recalculate. *Don't forget this!*

Continue to enter plug commands for each succeeding month. Do not do it for COL 13. Don't forget that the COL value will change for each month; thus the coordinates for MAR will be 1,3 and the plug values for MAR will be V23,2 instead of V23,1. If this process seems tedious, consider that by using the CLEAR DATA command (#113) you can save your table, excluding data but *including formulas*, so that you will not have to enter all this in years to come; you type it in once and it's done forever.

Step 28. Use the **G** command to jump down to ROW 15, COL 12. That should give you a good view of the end of the table. Note that you will end the year with only $377, after starting with $640. Let's see where all your money went. We can do that by summing all the rows to get totals for COL 13.

To do that, use the arrow keys or the G command to put the pointer in COL 13. Now type **S** (the SUM command) and then **1** (to begin summing from COL 1) and then **12** (to extend summing to column 12). Your final figures will immediately appear. Of course, some of the figures are irrelevant, such as the sum of the BEGINNING BALANCES or the figure in ROW 4 that includes that same sum of BEGINNING BALANCES. However, you might find other numbers in COL 13 interesting, such as $1,440 for cigarettes.

Step 29. Let's do a simple "what if" analysis. Suppose you want to buy a $1,000 stereo system and you're considering quiting smoking to do it. How soon—during what month—could you make the purchase without borrowing money?

Use the arrow keys to locate the cursor on ROW 16. Make sure that "ROW 16" appears at the top of the monitor (tap the down arrow key if necessary). Now we want to change the constant expenditure for this row to zero. Do this using command 31.

You now have to recalculate, not just once, but 12 times, once for each column. Do this by typing **98 <RETURN>** 12 times.

The result will show that you can buy the system as early as February, if you don't mind depleting your bank account down to zilch; or, buy it in May when you'll have a cushion of a couple of hundred dollars for emergencies.

This ends our tutorial. Save the table using command **112**. When prompted for the table's name, you can choose PRACTICE and overwrite your previously saved table, or type a new name. Once back at the ENTER COMMAND prompt, exit the program with the Stop command. Type **9 <RETURN>**.

ON YOUR OWN

This tutorial is just an introduction to ProfitPlan; you can do much more with it, as long as you plan ahead. Spreadsheet design begins with paper and pencil. Don't try to design your table at the computer; that's the slow and frustrating way. With your purpose for making the spreadsheet in mind, make a list of things you know and things you want to know about your subject. Then write down the relationships between them as expressed by arithmetical formulas.

Yoshiko Murdick has degrees in accounting and business administration and teaches Lotus 1-2-3. Wallace Hodge and William Murdick are professors at the California University of Pennsylvania.

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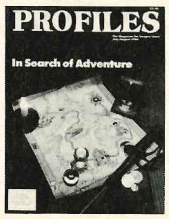

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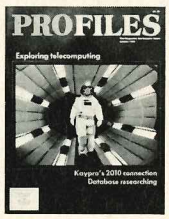

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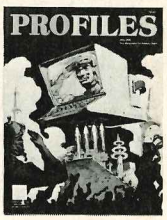

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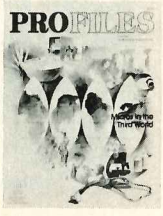

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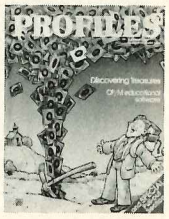
11



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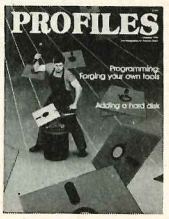

12

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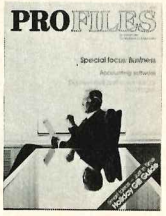
- Sorting algorithms
- C programming language

13



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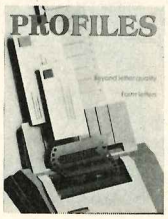
- Bookkeeping with Perfect Calc
- Accounting software roundup

14

DECEMBER 1985
- Z-System, part 1
- Key definition programs



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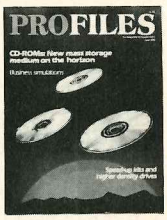


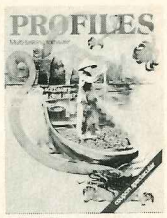
17

JUNE 1986
- CD-ROMs: an overview
- Business simulations

18

JULY 1986
- Idea processors for CP/M
- Changing WordStar translation tables
- Multi-format programs

19



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- Hong Kong software
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20

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21

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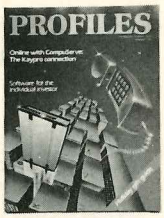

NOVEMBER 1986
- CompuServe forums
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23

DECEMBER 1986
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- Desktop Publishing – An Overview
- Planning a program with Flowcharts

24

FEBRUARY 1987
- Electronic mail services
- BASIC tutorial

25

MARCH 1987
- Laser printers
- Mailing list managers

26

APRIL 1987
- Online information services
- Beginners guide to telecommunication

27

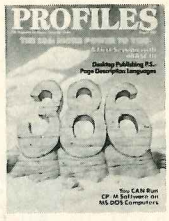
MAY 1987
- Data entry with Bar Code
- A first session with LOTUS 1-2-3

28

JUNE 1987
- Review of Ventura Publisher
- Project Management Software reviews

29

JULY 1987
- WordPerfect vs. MicroSoft Word – which one to buy?
- Local Area Networks – Workstations of the future



30

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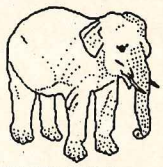

SCS-Draw turns your CP/M Kaypro into a free hand drawing machine. See what you're drawing on the screen too. Comes with drawing tools, windowing capabilities that let you draw pieces larger than one screen, lettering, textures, and much more. Save to disk, or print your work anytime. Simple. There's nothing like it. Turns your Kaypro 1, 2X, New 2, 2'84, 4'84, or 10 into a real Macintosh-like drawing machine. Kids love it, adults too. $57. Draw's new $19 PrintMaster graphics extractor lets you see PrintMaster graphics on your Draw screen and alter them too. Order today.

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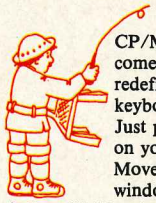
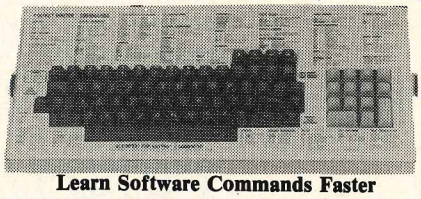


CP/M SmartKey version 4.2 now comes with windows. Lets you redefine every key on your keyboard from inside any program. Just push a key, a window opens up on your screen, redefine the key. Move the cursor anywhere in the window. Make corrections in the window. Unlike similar programs, SmartKey does not interfere with the regular function of your keyboard. Lets you redefine keys, stack them with numerous complex command codes, boilerplate paragraphs, inventory numbers, or whatever, and inject any of them into your work with a single key. Super time and keystroke saver. Central's price includes Paul Golding's $15.95 book, Screen Smarts, The Computer Tamers Guide free. Smartkey — $49. Order today.



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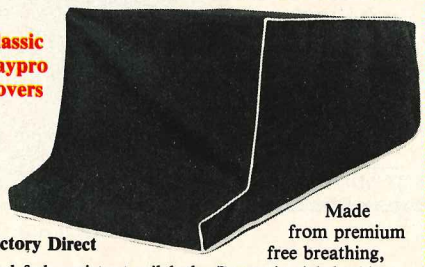

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NEAR DESKTOP PUBLISHING

A couple of months ago I wrote about "near-desktop publishing" programs available for Kaypro's CP/M computers. Though lacking the sheer muscle of true desktop publishing programs like Aldus' Pagemaker and Xerox's Ventura Publisher, the programs I reviewed were adequate for in-house newsletters and simple publishing tasks.

And they were relatively cheap: using the computer and dot-matrix printer you already own, they let you put out passable work.

This month I want to give MS-DOS users a chance. Of course, if you need true desktop publishing capabilities, nothing less than a full desktop publishing system like Kaypro's EXTRA! EXTRA! will do. But if not, I've got six programs that make MS-DOS Kaypros' output shine, and you don't need to replace your CPU, you don't need a laser printer, and you don't even need a hard disk and a ton of memory. With most of these programs, you just open the box and publish away. Some are primarily for producing newsletters; others let you publish virtually anything. The last two could be called personal typesetting programs.

Not all programs are created equal. Some are easy to use and some aren't; some produce newsletters adequate for public distribution, and some don't. But you don't have to upgrade your hardware for any of them. Depending on your needs, one of these programs may do it all. CONTINUED ON PAGE 50

BY JIM SPICKARD

PHOTOGRAPH BY GLENN STEINER

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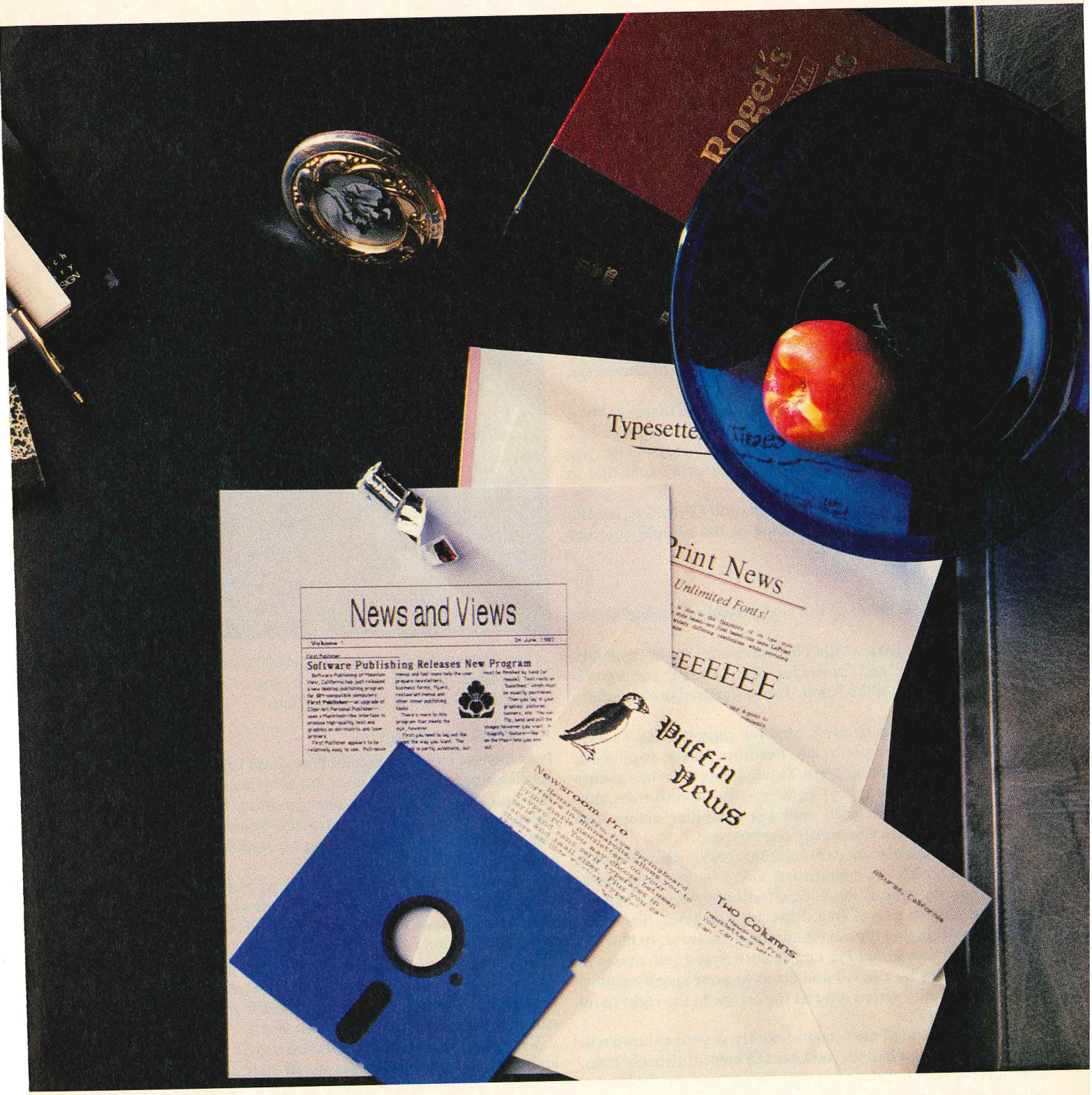
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Newsroom Pro
Two Columns

CONTINUED FROM PAGE 49

STARTING SMALL

Let's start at the bottom and work up. The first few programs I reviewed were copied from non-IBM-compatible computers and operating systems. (Remember, the original IBM PC was pretty useless: it had a 16K memory and no graphics display.)

These programs still bear the marks of their origin. They haven't changed much since being ported to MS-DOS. They're a good spot to begin.

The most limited program I looked at was FontStar, originally written for CP/M. As I said in my CP/M article, FontStar replaces WordStar's print driver and lets you put fancy typestyles in WordStar documents using an Epson printer. The print quality is adequate, though not outstanding—better than plain dot-matrix, but not as good as near letter quality. Sixteen styles ranging from Old English to Helvetica are provided, and all are proportionally spaced and include foreign characters. Or you can create your own styles.

FontStar isn't really intended for desktop publishing, but if you're handy with WordStar's column mode you can print a simple newsletter without much trouble. The program lets you specify where on the page your text will print: add that to typestyles and you've got a good start.

FontStar is identical under MS-DOS and CP/M. Dig out the September 1987 *PROFILES* and look at the sample FontStar newsletter I reproduced there.

USED APPLES

You may not have heard of the next program I looked at, but your kids have.

Springboard Software bills The Newsroom Pro as "sophisticated," "advanced," and "powerful." But it's really just a memory-hungry version of the Apple II program used in elementary schools.

Newsroom Pro opens with pictures representing various parts of a newsroom: photo lab, headline maker, copy desk, wire service, and printing press. Moving the cursor to a picture (or hitting a function key) calls up the appropriate subprogram. Each subprogram contains a similar menu. The program is so simple you hardly need to read.

Newsletters consist of two columns plus a banner headline—any of which can contain artwork. You type your newsletter at the copy desk. Choose which column you want to work with, and choose one of five different typestyles. Then just type. You can change typestyles anytime you want, or you can add artwork: Newsroom Pro comes with over 2,000 pieces of clip art that can be shaped and sized to your specifications. Text automatically wraps around the art, as in the right-hand column of figure 1.

A bar to the right of the screen shows how your column will look—and how much room you have left before hitting bottom. You can't see both columns at once, nor can you see the banner when entering text.

Newsroom Pro is easy to use. The graphics menus were, after all, designed for school children. The program supposedly requires 512K, but I ran it on less. I also used only one disk drive, but that took a lot of disk swapping. If you don't want to upgrade your hardware and don't need a fancy product, this program may suffice.

Like most programs originating on the Apple II, Newsroom Pro is not very flexible. Nor is the printed output very good—certainly not publishable quality. It only took me about an hour and a half to produce the newsletter in figure 1—counting installation time. But I would only want to use it in-house, not for customers.

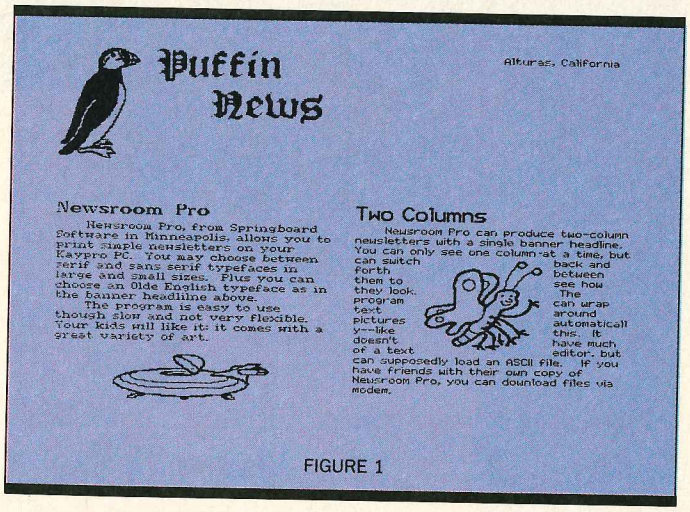


FIGURE 1

Say, Newsroom Pro would be perfect for school newsletters! It's so simple the kids could use it, and . . .

Somebody already thought of that.

RELATIVELY FRIENDLY

NewsMaster and Printmaster Plus, from Unison World, look a lot like Apple products, too. But they never were. The latter lets you print posters, banners, greeting cards, and custom calendars. It's menu driven, graphics oriented, and a breeze to use, but since I'm concentrating on newsletter publishing, I won't pursue it here.

NewsMaster builds full-scale newsletters. Unlike Newsroom Pro, its output can be several pages long and have more than two columns. The menus are lists of icons that you select with function keys.

The whole process is pretty simple. You choose a page layout—number of columns, whether or not to put a banner at the top, etc. You insert lines or borders if you want them. You can even shade areas. Then comes text.

You can enter text at the keyboard or you can read it in from an ASCII file. You can choose any of 30 or so fonts, ranging in size from 10 to 60 points. The program automatically reserves the right amount of space when you change fonts: you wouldn't want to have two lines print over one another.

If you look closely at figure 2, you'll notice I had trouble centering the banner headline vertically. For quite some time I couldn't figure how to do it at all—it kept overprinting the banner box. I finally entered a few blank lines in a small font. The result isn't perfect, but it will pass.

I had similar trouble getting the right and left columns to line up. NewsMaster treats columns like continuous text. That's great for wrapping text between columns, but it can be a pain when you want to align a separate story. As you can see, the right and left headlines don't match.

Once text is in place, you add your artwork. You choose an image, then enlarge it, shrink it, twist it, fold it, and draw on it until you've got what you want. Text flows around the pictures, but doesn't center around them. I suspect I could have done better here, too, but the manual gave little help—not even an index!

Unlike Newsroom, with NewsMaster you can see a whole page when you work. Actually, you have four choices: a full-page view, a half-page view, a view in which you see half a column, and a zoom view (for detailed art work). Very useful!

One thing though: NewsMaster is page-oriented. You have to build a page, then save or print it before building the next. A newsletter several pages long could take quite a while to construct.

Print quality depends on your printer. NewsMaster supports some laser printers, which of course have better output. Dot-matrix printers use one-pass graphics mode, which looks a little stringy. Figure 2 was printed on an Epson-compatible with a new ribbon. It's better than Newsroom, but not much. I'd hate to have customers judge my company by this work.

FIGURE 2

Like Newsroom, NewsMaster is best for schools and in-house work, where ease of use is more important than print quality. Between the two, NewsMaster wins hands down.

LOOKS LIKE A MAC

Software Publishing's First Publisher looks like it originated on the Macintosh. It didn't—I'm told its designer just likes the Macintosh interface and tried to duplicate it on the PC. An upgrade of ClickArt Personal Publisher (originally distributed by T/Maker), First Publisher is a lot more capable than the programs we've looked at so far.

The polish of figure 3 shows what I mean.

With that capability, though, comes added work on your part. You have the power to put anything anywhere, and you have to *master* it. You can expect to flub a few newsletters while you're learning.

First of all, get a mouse. The program claims it works with function and arrow keys, but I don't believe it. A mouse lets you put text and graphics *anywhere*—and that's the program's strength.

You start by laying out your page—positioning text and headers just where you want. Text rests on "baselines," which must be positioned exactly. If you want three columns and margins of a certain width, just tell the program and baselines are laid down. Then you erase baselines where you want banners or photos and move the rest around until you like their looks. Shift to text mode and type your text in.

First Publisher comes with several typestyles—Courier, Helvetica, and so on. You can buy more if you like. Each typeface comes in several sizes. If you enter text in graphics mode, you can stretch it, squeeze it, flip it, or smooth it with a "magnify" feature that modifies text one pixel at a time. You really get whatever you want.

You can, by the way, import ASCII files or files prepared with Software Publishing's PFS word processor.

Once text is laid down, just drop in your graphics. Flip them, stretch them, modify them, too—the mouse makes such changes easy.

Text flows around the graphics nicely, just as it flows nicely from column to column. Any text left over goes to an overflow buffer, from which you can fetch it for later placement.

It all sounds easy, and it is—once you get the hang of it. Figure 3 took me about four hours to make, primarily because I messed up the baselines and forced the program to hang. It seems once you've erased a baseline you can't get it back again. I searched the manual and tried a bunch of keys—to no avail. Finally I told the program to "start over" and it hung. Software Publishing has a bit of bug-killing to do.

Getting the layout right at the beginning seems to be crucial. Once I did that, I had no trouble at all.

First Publisher isn't just for newsletters: you can build business forms, flyers, menus, and greeting cards just as easily.

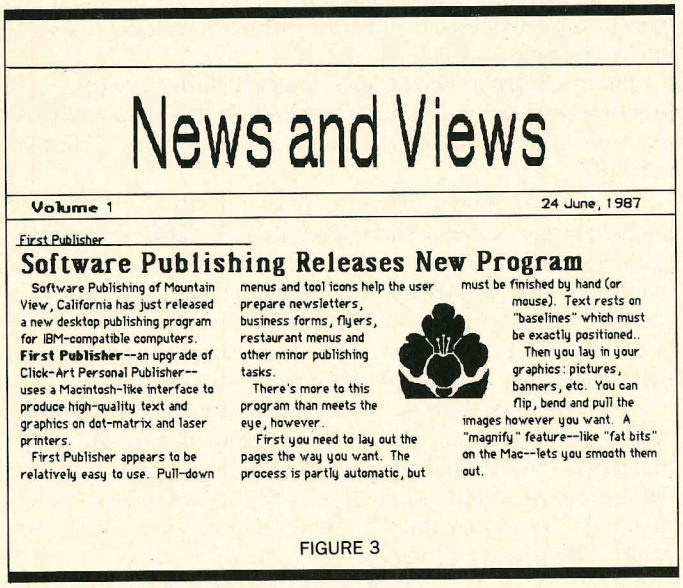
CONTINUED ON PAGE 52

CONTINUED FROM PAGE 51

In fact, the program comes with sample templates for each of these. Templates help beginners turn out real work while learning the program. With First Publisher, speed comes with expertise.

As you can see from figure 3, First Publisher is the only package so far that's produced decent output on a dot-matrix printer. "Draft" mode looks much like Newsroom's and NewsMaster's finished products. "Standard" mode doubles the density, and "smoothed" mode triples it. Not bad for a nine-pin printer.

Despite the problems I had, I'd recommend this program to anyone needing quality printing without paying a big price. Once learned, it will quickly repay its modest cost.



News and Views

Volume 1 — 24 June, 1987

First Publisher

Software Publishing Releases New Program

Software Publishing of Mountain View, California has just released a new desktop publishing program for IBM-compatible computers. **First Publisher**--an upgrade of Click-Art Personal Publisher--uses a Macintosh-like interface to produce high-quality text and graphics on dot-matrix and laser printers.

First Publisher appears to be relatively easy to use. Pull-down menus and tool icons help the user prepare newsletters, business forms, flyers, restaurant menus and other minor publishing tasks.

There's more to this program than meets the eye, however.

First you need to lay out the pages the way you want. The process is partly automatic, but must be finished by hand (or mouse). Text rests on "baselines" which must be exactly positioned.

Then you lay in your graphics: pictures, banners, etc. You can flip, bend and pull the images however you want. A "magnify" feature--like "fat bits" on the Mac--lets you smooth them out.

FIGURE 3

PERSONAL TYPESETTING

So much for the newsletter programs. The last two packages I looked at were really personal typesetters.

Fancy Font from Softcraft and LePrint from LeBaugh both produce superb copy on dot-matrix and laser printers. On my Citizen they used six passes to give me sharper text than I had ever imagined. That's twice as good as First Publisher at its best—and truly impressive.

I've written about Fancy Font before—in the CP/M desktop publishing article a couple of months back and in the June 1985 PROFILES, where I covered software to print foreign alphabets. The core of the system is the same on CP/M and MS-DOS: Fancy Font replaces your word processor's printer driver to produce high-quality text.

The MS-DOS add-ons expand the system significantly, making it worth further discussion.

Fancy Font formats text by means of special codes you insert in your text. "\c" centers a line, "\u" underlines, "\f1" switches to font #1, "\v6i" starts printing six inches from the top of the page, and so on. You can insert lines and boxes—even graphics created by other programs—all by means of these codes.

Once your text is written, you save it to an ASCII file on disk. Fancy Font reads it, along with a list of typefaces, and prints away.

Page control is only limited by your ingenuity: the program will print anything you want.

Fancy Font provides scores of typestyles—from the usual Times Roman, Helvetica, and Courier to Greek, Russian, and Hebrew. Basic styles and sizes come with the program; you can buy others at $15 per disk. I once used a music font to print a song book: quite a feat, that, as I couldn't see how it looked until I was done. (I previewed it in one-pass draft mode as I went along.)

But wouldn't it be nicer, you say, to hook up your word processor directly? After all, word processors can center and underline text, and some provide a good deal of page control. Why duplicate effort already made?

If you write with WordStar, WordPerfect or Microsoft Word, you're in luck. Fancy Font under MS-DOS provides add-ons to let you use these programs.

WSFont, the WordStar add-on, is the weakest of the three. It reads most, but not all, WordStar 3.3 formatting codes and prints accordingly. (WordStar 4.0 has more codes, so Fancy Font supports proportionally fewer of them). WordPerfect users do better. That word processor embeds all its formatting codes in the text, so it's a simple matter to translate them into Fancy Font's language.

Microsoft Word users, however, win big. Fancy Word, a stand-alone program, harnesses the full formatting power of Word and makes using Fancy Font a cinch.

If I had a laser printer, I'd be in better shape. The Laser Fonts add-on allows Word, WordPerfect, and WordStar 2000 to use Fancy Font fonts with Hewlett-Packard or Canon laser printers. You can download these fonts and use them just as you would the built-ins.

Laser printer owners will appreciate Softcraft's new Typefoundry series. An "outline package" lets you create and download regular, bold, and italic fonts in any size from 4 to 300 points. The packages aren't cheap, but they cost less than HP font cartridges and are more flexible.

Softcraft has some remarkable font editing tools. Font Editor lets you build custom fonts using a mouse—and the same kind of bit-by-bit editing offered by First Publisher. Font Effects lets you stretch fonts, shrink them, boldface them, and slant them.

No one will need all these add-ons, but almost anyone will find some of them attractive.

Fancy Font's only drawback, aside from a printing speed of eight minutes a page at full resolution (on dot-matrix) is that you can't preview your work onscreen. Its flexibility—particularly with Fancy Word—makes up for a lot, though.

I'd recommend it to anyone needing near-typeset quality at a low price.

LEPROGRAM

LePrint is a lot like Fancy Font. It, too, replaces your word processor's printer driver. It, too, uses codes inserted in text to control formatting. It, too, uses six passes with a dot-matrix printer. It, too, can import graphics images. And it, too, gives you nearly complete control over the page.

Where Fancy Font provides each of its typestyles in several sizes, LePrint provides them in only one size—and therein lies its advantage. LePrint can take that one size and create from it any size you want.

If you want to print a tiny "Q," for example, just type "{.ch 4 pt}Q". If you want one to fill an entire page, just type "{.ch 7.5 in}Q". I suppose you could make it larger if you wanted, though I'm not sure what you'd print it on: a 7½-inch-high "Q" fills up my paper.

No matter what their size, the letters are perfectly formed—no "fat-bit" editing needed here!

Second, LePrint gives you a preview function. At the DOS prompt, type "LP [filename]/P" and the page is printed to your screen. You can scroll up or down for inspection, then change it if you want.

LePrint News

14 Styles . . . Unlimited Fonts!

Much of **LePrint**'s power is due to the flexibility of its *type style* orientation. Since **LePrint** is *type style* based—not *font* based—the same **LePrint** program can support devices of widely differing resolutions while providing virtually unlimited control over type size:

EEEEEEEEEEEEEEEEEEEEEEEEEEE

LePrint gives you total control over the type size. From tiny 4-point to massive full-page letters and anywhere in between, **LePrint** provides exceptionally clean, crisp characters. The care and craftsmanship put into the letterforms is reflected in the sharpness and detail of even full-page letters—they are not simple magnifications of small fonts.

FIGURE 4 – SAMPLE OF LEPRINT

Third, LePrint comes as a package. You don't have to buy several pieces to get everything you want—everything's right there: fonts (including foreign alphabets), type sizer, laser support (including 600x300 dots per inch), and so on. Fancy Font has more fonts, but in the long run it's probably more expensive.

On the other hand, LePrint can't be hooked to word processors. Its formatting codes are based on WordStar's dot commands, so it's probably best suited to hard-core WordStar users.

You just have to make your choice.

Jim Spickard is a remote editor for PROFILES.

QUICK REFERENCE SUMMARY

(Note: Check to see whether your printer is supported by the program you want before you buy.)

Product: FontStar
Manufacturer: MicroNova
R.R.#5, Canning, Nova Scotia
Canada B0P 1H0
Distributor: Central Computer Products
330 Central Avenue
Filmore, CA 93015
Phone: 800/533-8049 (U.S.); 800/624-5628 (CA); 805/524-4189
Sugg. List Price: $49
Hardware: Epson or compatible dot-matrix printer

Product: Newsroom Pro
Manufacturer: Springboard Software, Inc
7808 Creekridge Circle
Minneapolis, MN 55435
Phone: 612/944-3915
Sugg. List Price: $129.95
Hardware: 512K, color graphics card, one drive (two recommended), dot-matrix or laser printer

Products: NewsMaster, Printmaster Plus
Manufacturer: Unison World
2150 Shattuck Avenue, Suite 902
Berkeley, CA 94704
Phone: 415/848-6666
Sugg. List Price: NewsMaster, $99.95; Printmaster Plus, $59.95
Hardware: 256K; Hercules, color or enhanced graphics card; two drives; dot-matrix or laser printer

Product: First Publisher
Manufacturer: Software Publishing
1901 Landings Drive
P.O. Box 7210
Mountain View, CA 94039
Phone: 415/962-8910
Sugg. List Price: First Publisher, $99; graphics disks, $39 each; font disks, $39 each
Hardware: 512K; Hercules, color, or enhanced graphics card; two drives. Mouse highly recommended. Dot-matrix or laser printer

Product: Fancy Font System
Manufacturer: Softcraft, Inc
16 N Carroll St., Suite 500
Madison, WI 53703
Phone: 800/351-0500; 608/257-3300
Sugg. List Prices: Fancy Font, $180; WordPerfect driver, $30; WordStar utility, $15; Fancy Word, $140; Laser Fonts, $180; Typefoundry Series main program, $95; Typefoundry outline pack, $200 each; Font Editor, $290; Font Effects, $95; Font Disks, $15 each
Hardware: 256K; any 80-column display card (Font Editor needs graphics card); two drives; dot-matrix or laser printer

Product: LePrint
Manufacturer: LeBaugh Software
10824 Old Mill Road, Suite 6
Omaha, Nebraska 68154
Phone: 800/532-2844; 402/334-4820
Sugg. List Price: Standard package, $175 (6 typestyles); extended package, $325 (16 typestyles)
Hardware: 384K, any 80-column display card (preview needs graphics card); one drive (two recommended), dot-matrix or laser printer

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LOTUS 1 2 3 GRAPHICS

Create charts and graphs with Lotus 1-2-3.

BY DANIEL L. SCHUSTER

ILLUSTRATION BY STACY KRIKORIAN

How to tap this often-ignored feature.

Lotus 1-2-3 is undoubtedly the dominant spreadsheet program in the MS-DOS world, and with good reason. It's powerful yet fairly easy for the beginner to use; it has on-line help; and it includes some data base capability. But one feature of Lotus 1-2-3 that is frequently ignored, especially by beginners, is its graphics capabilities. It's those capabilities we will examine here.

I'll assume that you are reasonably comfortable with the basics of Lotus 1-2-3 worksheets, that you know how to enter formulas, and particularly that you are comfortable with the techniques for executing Lotus commands and for defining ranges. For more elementary tutorials on Lotus 1-2-3, see "A First Session with Lotus 1-2-3" in the May 1987 issue of *PROFILES* and "Using Macros in Lotus 1-2-3" in the July 1987 issue.

To make the commands stand out for the reader, I'll indicate all Lotus commands either as sequences of words, such as **Type Bar**, or as sequences of letters, such as **TB**, and they'll be boldfaced to make them easy to find. The escape key will be referred to as ESCape.

CONTINUED ON PAGE 56

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CONTINUED FROM PAGE 55

If you're going to do graphing, you'll need data to work with. Create the worksheet shown below.

	A	B	C	D	E	F	G	H
1	Pulver Sales			Sales of Goods			Spring	Totals
2		Age	Jan.	Feb.	Mar.	Apr.	Totals	by %
3	==========	==========	==========	==========	==========	==========	==========	==========
4	Billings	42	4580	8800	7450	6500	27330	18%
5	Carson	35	3400	4218	3820	7411	18849	13%
6	Edwards	57	14230	2345	6500	4520	27595	18%
7	Jensen	24	870	2185	7300	2890	13245	9%
8	Harding	46	2487	9034	3480	5810	20811	14%
9	Sanders	31	4387	450	658	6520	12015	8%
10	Thompson	55	8372	3287	3188	5765	20612	14%
11	Wells	22	1735	2300	3200	2100	9335	6%
12	==========	==========	==========	==========	==========	==========	==========	==========
13	Totals		40061	32619	35596	41516	149792	

The total for each month is generated using the @SUM command. For example, the total for January is calculated with the formula @SUM(C4..C11). The "Spring Totals" columns is calculated using the same function. The "Totals by " column is calculated by using each salesman's Spring Total (column G) and dividing it by the total of all sales, which is found in position G13. The formula for the Billings entry is G4/G13. Copy this formula into the rows for the remaining salesman. Remember that the two $'s in this forumula indicate that the G13 position is fixed and will not be adjusted when the formula is copied for the remaining salesman. Finally, force the last column to be displayed with % signs as opposed to decimals by using **Range Format Percent**, specifying 0 decimal places.

PIE GRAPHS

Now you can create a pie graph using the data from your spreadsheet. It's the easiest type of graph to create, and it illustrates a couple of graphics options available in Lotus. Make sure that you've got the worksheet set up just right, and that you are in the READY mode (READY displayed in the upper right corner). Now type the / character, then **G** for Graph. You will be presented with the following line at the top of your screen:

Type X A B C D E F Reset View Save Options Name Quit

with Type highlighted. I'll refer to this as the main graph menu. Hit Enter to select **Type** and you will see:

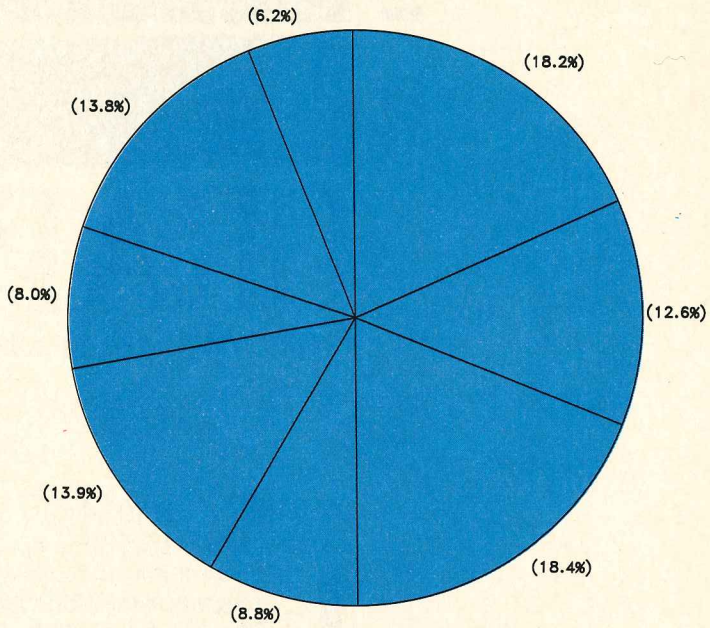
Line Bar XY Stacked-Bar Pie

with Line highlighted.

Now type **P** for Pie. You will automatically go back to the main graph menu.

Next you need to tell Lotus what data you wish to graph. Type **A** and you will see "Enter first data range:". A data range is an area of the worksheet that contains the information you wish to graph. For your pie graph, enter **H4..H11** to indicate the range from 18% (Billings) to 6% (Wells) in the "Totals by %" column. Hit Enter. You should see the main graph menu. Hit **V** (for View).

What happens now depends on what monitor and graphics board you have, and how you have configured your system. In general, if you have a color monitor or a monochrome monitor with Hercules-compatible graphics, you will see your graph. If you have a low-resolution color monitor, you may see some characters run together or wrapped around the screen. This is normal and will usually be resolved when you print your graph. If you have only a composite monitor without graphics capability, all you will get is a beep, but you can still save and print your graphs. You just can't see them onscreen. For the rest of this article I'll assume you have some type of graphics equipment. You should have a pie chart that looks like the following:



LABELS AND TITLES

You now have a nice pie chart, but without labels you can't tell who is responsible for which percentage of sales. It's easy to attach labels that will take care of this problem. Hit the ESCape key and you'll be back at the main graph menu.

The obvious way to label your pie chart is to use the names in the A column. To do this, hit **X** and you'll see "Enter X axis range:". The X axis range is the area of the worksheet where you'll find the labels that will identify your data. Type **A4..A11** to indicate the range containing the names of your salesmen and hit Enter. Now choose **View** again, and you'll get the same graph with names labling the pie sections that represent sales percentages. Hit ESCape to return to the main graph menu.

You also need to add a title that identifies the graph. Select **O** for Options and you'll see the Options menu. Choose **Titles**. Now choose **First** and type **Spring Season Sales** and **Enter**.

CONTINUED ON PAGE 58

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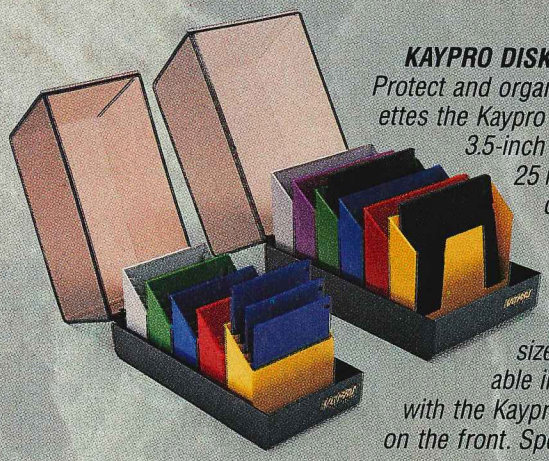
Total (check or money order) ____



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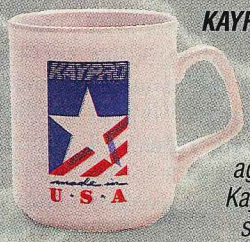

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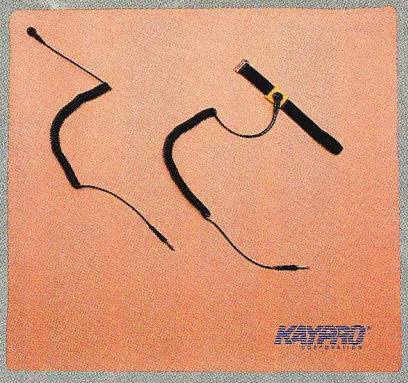

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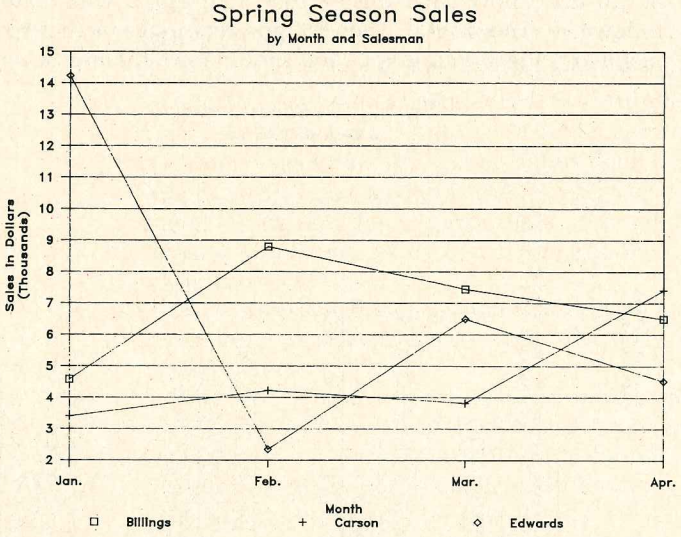
CONTINUED FROM PAGE 59

LINE GRAPHS

You can easily change your graph to the familiar line graph. To do this, ESCape from the picture of the graph and choose **Type** and then **Line**. Now **View** the graph. This graph is really a confusion of crossing lines. To make a more sensible graph, you probably would want to eliminate some of the lines. You can do this from the main graph menu by selecting **Reset** and then resetting the **D**, **E**, and **F** ranges. Now ESCape back one level and **View** the graph. It should look like this:



FORMATTING LINE GRAPHS

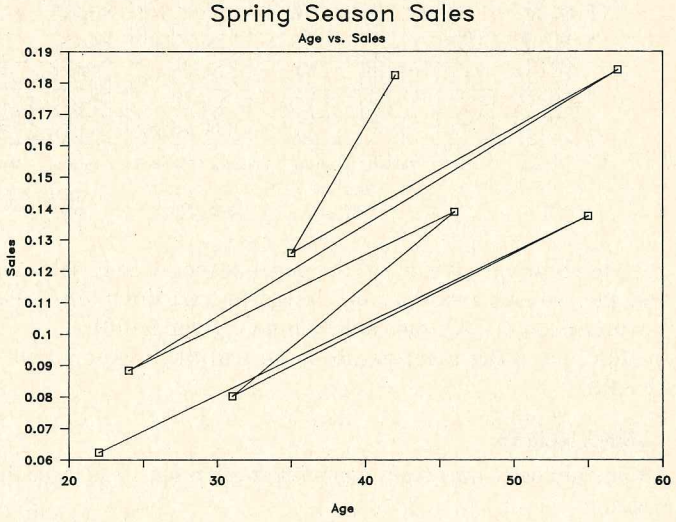
Note that the graph has both lines and symbols to represent the data. For example, all of the data points for Carson get a "+" sign. You can set this feature in several formats. To try this, ESCape back to the main graph menu, choose **O**, then **F** for Format and **G** for Graph to specify a format for the entire graph, and then **Lines**. Now you have told Lotus to draw lines only, without symbols such as the "+." ESCape back to the main graph menu and **View** the graph. You see the same graph as before, but without the symbols. Unfortunately, you can't tell which salesman goes with what line without the symbols. Keep that in mind as you create graphs.

Line graphs are usually best for comparing only a few different sets of data at a time and are particularly useful for emphasizing a radical increase or decrease—think of all the graphs you've seen representing the rate of inflation or unemployment.

XY GRAPHS

The final kind of graph is called an XY graph, and it's probably most useful to mathematicians or others with scientific data to analyze. Rather than using the X axis range merely to provide labels for the horizontal axis, you use it to set a scale for the X axis. Thus, an XY graph requires at least two data ranges, one being the data for the X axis and the other information for the A data range (and other data ranges, if appropriate).

As a simple example, let's see how age and sales are related for our sample group of salesman. From the main graph menu, choose **Reset**, then **Graph**. Now choose **Type**, then **XY**. Now define the **X** axis range as B4 through B11 and the **A** data range as H4 through H11. With **Options Titles First** set the first title to be "Spring Season Sales." Now, using **Titles Second** set the second title to be "Age vs. Sales"; set the X title to be "Age" with **Titles X**; and set the Y title to be "Sales" with **Titles Y**. Finally, have Lotus display the data as symbols only with **Format Graph Symbols**. Now ESCape to the main graph and **View** your file. You should see the following:



It's clear from the graph that older salesmen generally do much better than their younger counterparts.

PRINTING THE GRAPH

Printing a graph is done through a different part of the Lotus 1-2-3 system. Exit the worksheet, making sure that you save the worksheet if you plan to use it again. Now choose **PrintGraph** from the Lotus Access System. There are several options presented to you in the main print graph menu. If you have Lotus 1-2-3 Release 1, then you see

Select Options Go Configure Align Page Quit

If you have Release 2, then you've got

Image-Select Settings Go Align Page Exit

Either way, you need to establish some basic settings. We'll take a quick look at these for practice, but you may need to refer to your manual for all the details.

PRINTER AND DIRECTORY SELECTION

With release 1, select **Configure** and then **Device**, and select

your printer. Then select **Files** and **Picture** to enter the directory where Lotus can find your PIC files. ESCape back to the main print graph menu.

If you've got release 2, select **Settings**, then **Hardware**, and finally **Printer**. Select your printer. Now choose **Graph-Directory** and indicate where Lotus can find your PIC files. ESCape back to the main print graph menu.

With both releases you must set your printer so that the top of the paper is properly aligned, then choose **Align** from the main print graph menu. For release 1 you should now choose **Select** and choose the graph you wish to print. With release 2 select **Image-Select** and choose the graph. Finally, make sure your printer is on and then choose **Go**. You'll have to wait a while for your graph to be prepared, but it will start printing soon. Practice printing all of the graphs and you're on your way.

We've gone through quite a bit of the graphics capabilities of Lotus 1-2-3. If you're a little dazed don't be surprised. There's a lot there, but the basics are easy, so stick with them till you're comfortable. Then add some of the details as you need them, and remember that there are some things we didn't cover, so don't forget to read your manual. Experiment and soon you'll be producing graphs quickly and expertly.

Daniel L. Schuster teaches mathematics and computer science at the College of Eastern Utah.

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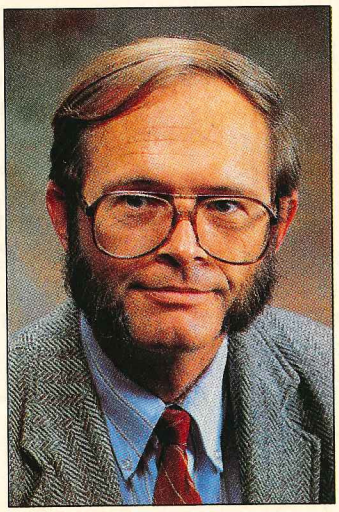

RICHARD STARKMAN

THE HARDCARD 40.

BY TOM ENRIGHT

This month's choice is the Hardcard 40 from Plus Development Corporation. Anyone considering adding a hard disk to a floppy-based system or a second hard drive to an existing hard-disk system should give this drive serious consideration. While the price ($1,195) is not low, you get a full measure of quality for your money.

Even the appearance of theHardcard 40 gives a definite impression of quality. Other vendors have marketed hard disks mounted on controller cards, but many of them look like high school metal shop projects. Some even look like they were assembled from a kid's erector set. The Plus Development Hardcard, by contrast, looks like the components were designed from the ground up to fit and work together.

The Hardcard 40 puts a 40-megabyte hard disk and controller on single expansion board. That board fits into a full-length expansion slot on IBM PC- and AT-compatible computers. The only restriction is that you must be running MS-DOS 3.0 or newer.

THE OVERALL PACKAGE

When you purchase the Hardcard 40, you receive a full-length expansion card, a diskette, and a 58-page manual. The plug-in expansion card holds the disk controller and hard disk. The diskette contains the hardcard device driver and programs for nonstandard installation. The manual covers installation of the hardcard on a variety of computers in several configurations.

The Hardcard 40 uses two 3 1/2-inch disks, four read/write heads, and its own RLL (Run Length Limited) disk controller. RLL controllers can put nearly twice as much data on a disk as normal MFM (Modified Frequency Modulation) controllers. These features put the Hardcard 40 on the leading edge of hard disk technology.

The fact that Plus Development controls selection of both major components of the disk subsystem—the controller and the disk drive—is important. Not just any hard disk will work dependably with an RLL controller—a high-quality drive is absolutely necessary. By controlling both components, Plus Development ensures that its product won't let you down.

INSTALLING THE HARDCARD

Installing a hard disk is not a task for inexperienced computer users. However, the installation process for the Hardcard 40 is the easiest I have ever encountered. Installation consists of two basic steps—physical and logical installation.

Physical installation entails placing the parts of the subsystem in your computer chassis. Logical installation consists of setting the drive partitions, formatting the disk, and then transferring your files to the drive.

Physical installation of the Hardcard 40 couldn't be simpler. Simply plug the card into an available full-length slot and you are finished. With other systems you must install the drive in the drive bay, plug the controller into an expansion slot, and run two data cables between the controller and the drive and a power line from the power supply to the drive. On the Hardcard, power is taken from the bus, and connections from the controller to the drive are made at the factory.

There's only one thing you must be careful of during physical installation: the Hardcard must be installed in an eight-bit expansion slot. The drive and controller shield can prevent the card from being fully inserted into a 16-bit (AT class) expansion slot. The shield is metal and can short out on the metal expansion slot fingers.

(I inadvertently did exactly that when installing the card in a Kaypro 286. No damage was done—the system simply refused to recognize the Hardcard. But it did take awhile before I went back and read the section of the manual where it warns you to only use an eight-bit slot.)

Logical installation is a little more complex, but it's still much easier than with other systems. You may have to low-level format other drives, but Plus development has already done that for you. (Low-level formatting on Kaypros is done with the Service, Testing and

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Utilities program, which costs extra—it doesn't come with your system.) The steps needed for logical installation of the Hardcard are setting the logical disk partitions and high-level formatting.

Partitioning is done with the FDISK program that comes with MS-DOS. MS-DOS does not recognize a disk larger than 32 megabytes, so the Hardcard 40 must be partitioned into two logical drives. Default settings for the Hardcard are for two 21-megabyte drives. This means you simply run FDISK and accept the default partitions. Then you are ready to format the drives.

If you need to set the partitions differently, the manual gives detailed instructions for doing so. Also, programs on the distribution disk are used when setting non-standard partitions. The only other program you need on the distribution disk is the device driver (PLUSDRV.SYS) that you place in your CONFIG.SYS file.

High-level formatting is done with the standard FORMAT program that came with your computer. Since you have divided the Hardcard into two logical drives, you have two drives to format. Assuming the Hardcard is the only hard drive in the system, they would be drives C and D. Formatting consists of entering the commands FORMAT C: /S (to put the system files on drive C) and then FORMAT D:. Then you can transfer your files to the new drives and you're in business.

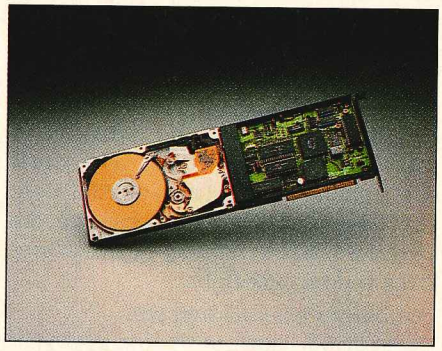
HARDCARD PERFORMANCE

For the purposes of this review, I installed the Hardcard 40 in a 4.77 MHz Kaypro PC, an 8.0 MHz Kaypro PC, a 6.0 MHz 286i, and a 10 MHz 286i. The Hardcard worked excellently in each of these computers. The only failure was on the Kaypro 386. The 386 stubbornly refused to boot from or recognize the Hardcard.

Claimed performance for the Hardcard 40 includes an average seek time of 35 ms (milliseconds) on 21-megabyte volumes and average power consumption of 8 watts. In testing the Hardcard, I used benchmark software from both PC Labs and Core International.

Kaypro has used several brands of hard disks in its machines. The Shugart ST225 (20-megabyte) is representative of the performance average. The Shugart delivers a 70 to 75 ms average seek time under the Core International benchmark program. Using the same benchmark, the Hardcard gave average seek times of from 28 to 35 ms. This test records the average time for the read/write head to move to any cylinder (track) on the disk.

Average seek time and track-to-track seek time are major arbiters of how fast a particular drive and controller combination work. The Shugart 225 drives scored 19.8 ms track-to-track seek times on the Core International benchmark. The Hardcard 40 scored 8.5 ms on the same test.



The Hardcard 40 is clearly an excellent performer. Larger and faster drives are available from other vendors, but they cost as much as or more than the Hardcard.

RATING THE MANUAL

The manual that comes with this drive is an installation and reference manual. Once the drive is installed you have little reason to refer to it again. As mentioned above, it covers installation of the Hardcard 40 in a variety of computers. Kaypro is not mentioned by name—you simply follow the instructions for an IBM PC XT or IBM PC AT, depending on which Kaypro model you have.

Much of the manual is devoted to installing the Hardcard in non-standard configurations. It has step-by-step instructions for installing the Hardcard both as the only hard disk and as a second hard disk in a system. Also covered is partitioning the Hardcard as several different-sized drives. The only situation not covered is installing the Hardcard as a single 40-megabyte drive. That requires special software (such as SpeedStor from Storage Demensions) to get around the 32-megabyte MS-DOS barrier on disk size.

This manual is the first one I've seen that's good enough to allow non-experts to install hard disks. I wouldn't recommend that a complete neophyte attempt the installation, but a reasonably experienced user should be able to handle installing the Hardcard without much trouble.

WINDING DOWN

All in all, the Plus Development Hardcard 40 is an impressive product. It is easy to install, gives fast disk I/O, and has a low power draw. And to a certain extent it's even portable. You could install the Hardcard on one Kaypro PC, use it for awhile, then move the Hardcard to another Kaypro PC and simply plug it in and use it without reinstallation.

The purchase price is higher than for most other drives you see advertised, but this is a top-quality drive that will run rings around less expensive ones.

SCORECARD

Features:	Very Good
Performance:	Excellent
Documentation:	Very Good
Ease of Use:	Excellent

QUICK REFERENCE SUMMARY

Product: Hardcard 40
Manufacturer: Plus Development Corp.
1778 McCarthy Boulevard
Milpitas, CA 95035-7421
Phone: (408)946-3700
Sugg. List Price: $1,195

PRINTWORKS FOR LASERS AND DESQVIEW

BY TOM GRINER AND LEONARD LEENHEER

Products reviewed by members of the Professional Software Programmers' Association this month are Printworks for Lasers, a memory-resident program that provides access to all the features of laser printers, and DESQview, an MS-DOS multitasking program.

PRINTWORKS FOR LASERS

Printworks for Lasers unlocks the power of your laser printer, allowing you to use the powerful features designed into these machines. This is the sort of software that should come with every laser printer.

Printworks for Lasers runs on IBM PCs and compatibles with 256K of RAM and DOS 2.0 or higher. It supports Hewlett-Packard Laserjet Printers (including the PLUS and 500 PLUS models), Canon LBP-8 A1/A2 Laser Beam printers, the NCR 6416 Laser Printer, and the Xerox 4045 CP Copier/Laser printer.

Features and Performance.

Printworks for Lasers is a memory-resident utility that allows access to the full capabilities of a laser printer. You can reset margins, change fonts, and print multiple copies with a few simple keystrokes. Because Printworks for Lasers is memory resident, all of its features are available even from within other programs.

The program includes advanced features that allow you to write memos, address envelopes, and have the laser printer emulate other popular printers. The margin selection feature lets you print on special sized paper, use preprinted letterhead, and confine output to specific portions of the paper. The font selection commands change the font for the next document printed. The font selected may be any of the printer's internal fonts or downloaded fonts already in the printer's memory. The point and pitch of the fonts can also be set to any value that the printer is capable of using.

Special "power printing" commands can be embedded in text to instruct Printworks to include graphics or change fonts during printing. These commands allow you to select italics, proportional printing, and just about anything else the printer is capable of.

Printworks for Lasers performs its tasks quickly and easily — once it's installed.

Printworks for Lasers performs its tasks quickly and easily — once the user has installed the program and understands the commands. Although the program works well once everything is set up and understood, getting to this point can be difficult. Complete familiarity with DOS and the workings of your printer are assumed. New users will need help at first because the manuals are somewhat confusing and the program tends to lock up unless everything is done just right.

Documentation and Support.

The program comes with a large instruction manual, hardware notes, a reference guide, and a long "tips" file on the disk. The manual could be titled "Everything You Ever Wanted to Know About Printworks for Lasers — and More."

The manual is comprehensive, with a detailed index and highlighted boxes to emphasize important points. But the mass of information is overwhelming; you must wade through pages of technical data to locate simple facts needed to use the program.

Separate "Hardware Notes" instruct you to ignore some information and to do some things differently. This is because the hardware notes update an older manual for this version of the program. The warning "READ THIS FIRST" appears in several places, which makes it hard to proceed with confidence. First-time users must spend some time deciphering the manuals before they can fully understand how to use the program.

Although the program is not copy protected, each copy has a unique serial number so that users who hand out copies can be traced. SoftStyle does not have a listed technical support line; you are forced to call the business office in Hawaii. — *T.G.*

SCORECARD	
Features:	Very Good
Performance:	Very Good
Documentation:	Good
Ease of Use:	Satisfactory
Error Handling:	Fair

DESQVIEW

DESQview 2.0 from Quarterdeck Office Systems is a multitasking program for MS-DOS computers. A multitasking program controls the environment in which other programs execute. DESQview acts as a go-between for other programs and MS-DOS and allows several programs to run concurrently.

DESQview offers convenience and increased productivity when used on a fixed disk system with 640K of memory. Use on a dual-floppy PC or with less than 640K is possible, but not recommended.

Features and Performance.

DESQview requires at least 512K of RAM (640K recommended) and DOS 2.0 or newer and supports both EMS (Lotus, Intel, and Microsoft) and EEMS (AST, Quadram, and Ashton Tate) expanded memory boards. It also supports monochrome, CGA, EGA, and VGA video, as well as most popular mice. Installation and setup can be done in less than 15 minutes.

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The installation and setup procedure is easy. The installation program asks a few questions about your system and then automatically copies the DESQview programs and control files to your hard disk. A setup program then runs automatically, asking a couple of questions and completing the installation. An expanded setup program is provided that allows you to manually set optional features and hardware parameters, or change the default settings for performance, monitors, or window layout.

DESQview maintains a set of parameters for each program that runs under its control. Popular programs such as Lotus 1-2-3, Crosstalk, and WordStar (and 75 others) are recognized by DESQview automatically. Parameters for unrecognized programs have to be entered manually. Parameter entry is done from within DESQview by selecting "add a program" from the main menu.

If you have a hard disk, the installation program searches its directories and updates the control files to let DESQview know where these programs are located. If you move a program to a different directory, tell DESQview about this change by updating the parameters.

Each program under DESQview's control runs in a separate window.

Each program under DESQview's control runs in a separate window. To start a program you "open" the window for that program. DESQview divides the screen into sections, and as each window is opened, all or part of the screen is set aside for that window. Up to nine windows can be open at the same time, so there is bound to be some overlap. The "active" window is denoted with a double-lined border and is in front of all other windows. The only exception is for programs that write directly to video memory. They get the entire screen as their window.

Although there may be many windows open, you can work with only one at a time, switching active windows with two keystrokes. For example, you can load Symphony in one window, Wordstar in a second, and Crosstalk in a third, with a DOS service window as a fourth. You may then switch from window to window to work on the separate tasks. Each window shares the total amount of execution time available, with the active window receiving the largest portion.

Programs running under DESQview will run somewhat slower than normal—how much slower depends on how many tasks are in the background and the allocation of CPU time. The advanced setup program allows you to alter the allocation of CPU time to foreground and background tasks. The default is nine clock ticks to the foreground task and three to each background task.

One caveat about running multiple programs concurrently is that the total amount of memory needed for all programs may be more than the PC has available. DESQview uses virtual memory techniques to swap programs from memory to disk and back as needed. This lets your PC appear to run programs in excess of its memory capacity.

The price you pay for virtual memory is the time required to move programs to and from disk. Symphony will take 30

CONTINUED ON PAGE 67

"Dear Genifer..."

Q: "You saved me time with dBASE but gave me a guilty conscience. Aren't you ashamed?

O.K. I admit it. Genifer is a fabulous application generator that produces complete applications in minutes, not days. But that's the problem. I told my client his project would take a full three days. With Genifer it took me just forty-seven minutes! I billed him for the full time and now I feel just awful. Don't you understand? Genifer is a moral blight on the nation!"

– Righteously Indignant

A: Dear Righteously:

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ON THE PRACTICAL SIDE

BY MARSHALL L. MOSELEY

This month we take a look at the newest graphics board provided with Kaypro computers: the Half-Length EGA Board.

The HLEB is a specially licensed version of the EGA Wonder board by Array Technologies Incorporated. The HLEB is an IBM EGA-compatible graphics adapter. It supports all EGA video modes and comes with 256 kilobytes of memory on the board. When the computer is powered up or reset, the HLEB displays a sign-on message that reads "ATI EGA Wonder BIOS, Version *XXX*." *XXX* is the BIOS version number for that particular card.

The HLEB can provide any standard type of video on any standard monitor. It will do EGA or CGA graphics on a monochrome monitor, for example, or EGA graphics on a CGA monitor.

The HLEB has eight DIP switches that designate what type of video is used on power-up (see the charts below for the complete settings). Unlike earlier ATI boards, there is no emulation mode *per se*. Rather, the first four switches tell the HLEB what type of video is desired, and the next three tell it what type of monitor you have. If the video type/monitor combination requires an emulation mode, the HLEB supplies it.

The combination of a monochrome monitor and EGA video produces stunning monochrome graphics; the resolution and gray scale provided by the HLEB create sharp, clear graphs and charts.

The HLEB can also switch video modes on the fly. If you have it configured to imitate a monochrome board, for example, and your software transmits signals for CGA or EGA, the HLEB will automatically switch into a color emulation mode. You never see the switch; you just see your computer running every program you throw at it.

The eighth DIP switch toggles this auto-switch mode. If switch 8 is ON, the HLEB provides any type of video to any type of monitor at any given time; if it's OFF, the HLEB performs like an IBM EGA board and nothing more.

Provided with the HLEB is the program SMS.COM, which allows you to switch video modes after the computer boots. You can switch from CGA to monochrome, or from monochrome to EGA—every mode the board provides is available. Additionally, SMS lets you enable the HLEB's auto-switching abilities.

This comes in handy because some computers, notably the 10 Mhz 286i and the Kaypro 386, have trouble booting when auto-switch mode is enabled. With these machines it is best to set switch 8 OFF, disabling auto-switch mode. Then, once the computer boots, you can enable auto-switching by typing SMS ENAB and pressing Enter. Put this command in your AUTOEXEC.BAT file and SMS will run automatically when the computer boots.

The latest HLEBs produced by Kaypro provide a video mode for use with multiple frequency monitors such as the NEC MultiSync or the Sony MultiScan. In this mode the monitor has a resolution of 800 by 560 pixels, rather than the EGA standard 640 by 350. Check your HLEB BIOS version number; if it's 4.0 or higher, you have access to the high-resolution mode.

The Half-Length EGA Board Switch

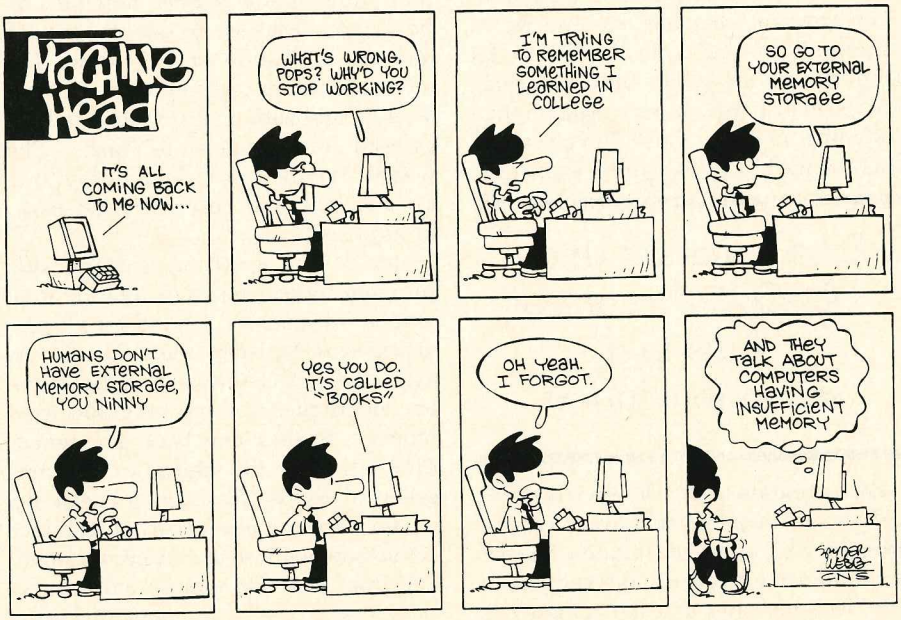
Switch Settings for Default Video

Switches	1	2	3	4
MDA	OFF	OFF	ON	OFF
CGA(40X25)	ON	OFF	OFF	ON
CGA(80X25)	OFF	OFF	OFF	ON
EGA(NORMAL)	ON	ON	ON	OFF
EGA(ENHANCED)	OFF	ON	ON	OFF

Monitor Type Switch Settings

Switches	5	6	7
Multiple Frequency *	ON	OFF	ON
Enhanced Monitor	ON	OFF	OFF
RGB Color	ON	ON	OFF
Monochrome	OFF	ON	OFF
Composite	ON	ON	OFF

* With BIOS version 4.0 and above only.



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CONTINUED FROM PAGE 65

seconds or so to swap to or from a hard disk on an XT class machine. One solution to the disk swapping dilemma is to install more memory, either as a RAM disk or extended memory. To this end, DESQview supports both EMS and EEMS standards for expanded memory cards.

DESQview offers some other features worth mentioning. Because DESQview controls the access to each program and the screen, information in one window can be moved to another window. DESQview's Mark and Transfer commands are used to accomplish this task.

DESQview also offers a macro feature called "Learn" that allows a key to be defined as a series of characters. For example, you could set ALT-F to be / FRTEST in the Lotus 1-2-3 window. Then when ALT-F is pressed, Lotus will retrieve the file TEST. The same key can have different definitions in other windows.

Documentation and Support.

Quarterdeck has put together an excellent manual for DESQview. It includes step-by-step instructions for installation and setup, as well as a tutorial. Each major function has a chapter to itself, and the page layout is easy to read and follow. Appendices include a rather complete trouble-shooting section and an interfacing section to aid programmers in producing DESQview-compatible programs.

Quarterdeck offers technical support to registered users who pay for the phone call. At times access to the support department was excellent; at others it was not as good. — *L.L.*

SCORECARD	
Features:	Excellent
Performance:	Very Good
Documentation:	Excellent
Ease Of Use:	Very Good
Support:	Very Good

Tom Griner has been programming computers for more than a decade. He specializes in assembly language programming and has had programs published through major software corporations such as Atari.

Leonard Leenheer is an analyst with a midwest telephone company. He has an MBA in computer and information science and 13 years of experience in designing and implementing computer systems.

QUICK REFERENCE SUMMARY

Product: Printworks for Lasers
Manufacturer: SoftStyle, Inc.
7192 Kalanianaole Hwy., Suite 205
Honolulu, Hawaii 96825
Phone: (808)396-6368
Sugg. List Price: $125

Product: DESQview 2.0
Manufacturer: Quarterdeck Office Systems
150 Pico Boulevard
Santa Monica, CA 90405
Phone: (213)392-9701
Sugg. List Price: $129.95

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THE MIS DEPARTMENT

BY MARSHALL L. MOSELEY

This month we take a look inside Kaypro's Management and Information Systems (MIS) department and at the ways Kaypro Corporation uses the computers it sells.

The MIS department is responsible for maintaining Kaypro's local area network, or LAN—a series of computers wired together so they can communicate with each other. At Kaypro's facility in Solana Beach, California, several departments are connected this way for greater efficiency and productivity, and other departments will soon be added to the network. MIS uses the award-winning Novell SFT Netware 286 II to run its system (Kaypro distributes Novell software and hardware).

In a way, the decision to distribute Novell brought about the formation of MIS.

"It was really a natural progression of events," says Patricia Crabtree, Kaypro's operations manager. "We decided to distribute Novell's product at the same time a need arose within the company to improve interdepartmental communication and streamline procedures. Using our own products seemed like the perfect solution."

THE HARDWARE AND THE SOFTWARE

Kaypro's LAN consists of about 70 workstations (Kaypro PCs and 286i's) connected to four file servers (286i's). A file server is a computer dedicated entirely to holding files and controlling user requests for access to those files. Each file server contains two 133-megabyte hard disks for storing files, and each runs Novell Netware.

The choice of Novell as a network operating system was obvious, but choosing a data base system and programming language was not so easy. After much research, Dataflex, a product of Data Access Corporation of Miami, Florida, was chosen. Dataflex is a relational data base system with a powerful query and programming language.

After choosing a language, MIS looked for accounting and sales software, written in Dataflex, that came with source code its programmers could modify. It chose the software sold by Data Modes Corporation of Oklahoma City, Oklahoma.

Currently, the sales, shipping, receiving, accounting, and purchasing departments are using the Data Modes software. Plans are in the works for other departments to come aboard, and the people in MIS are preparing the software.

WHO'S WHO IN MIS

Norm Bornstein is the MIS department supervisor, and he's also a programmer.

"MIS is a real asset to Kaypro because it lets people spend more time doing their jobs," says Bornstein. "The network frees them from having to become computer experts just to get something done. Using the software we provide, Sales can sell and Technical Support can stay on the phones. More work can get done more efficiently."

Ernesto Bautista takes care of the network hardware. Bautista says the hardest part of maintaining a network is handling dust. "It gets everywhere. Both the workstations and the file servers need to be cleaned periodically, or their power supplies will overheat. It's all part of system maintenance."

Mike Packard and Linda DeBakcsy are the maintenance programmers for MIS. Using the Data Modes programs as a starting point, they modify them to meet Kaypro's needs. They also write original software for use on the network.

"One of our biggest concerns is program interaction," notes Packard. "In a system as complex as the network, where everyone shares data, one small change can affect a great many people."

"That's why we have a separate file server for new or altered programs," says DeBakcsy. "Each program undergoes rigorous testing before it is used with actual data."

THE EFFECT OF MIS

After almost a year, what effect have MIS and the network had on Kaypro Corporation?

"A very positive one," says Crabtree. "The network software generates reports that were unavailable before, letting us make more informed decisions. Also, processing time has decreased; we can now receive an order and ship it the same day."

Norm Bornstein agrees, citing better interdepartmental communication. "Where each department used to work with a separate data base, now they all use one. When changes are made, each network user sees up-to-the-minute information."

THE FUTURE

In the months ahead, the materials department will start using the network. The change is expected to make Kaypro Corporation more profitable and efficient, and MIS is looking forward to the challenge.

Blood saves lives. And your company can make a major contribution to the constant need for blood in your community. Please contact your local Red Cross Chapter to see how easy it is to hold a blood drive at your company.

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NEW PRODUCTS

EDITED BY MARSHALL L. MOSELEY

The following new product listings are not reviews and should not be considered endorsements. To be considered for publication in this column, press releases should be sent to Marshall Moseley, "New Products" editor, c/o PROFILES Magazine, 533 Stevens Ave., Solana Beach, CA 92075. Releases must state prices and the operating systems the products support. Include photos if available.

WINDOWS GRAPHICS PROGRAM

Windows GRAPH is a business graphics and charting program compatible with Microsoft Windows. Windows GRAPH creates charts and graphs from data files and can create most of the common chart types, including area, bar, column, line, pie, scatter, table, and combination charts. It runs under the Microsoft Windows environment, if you have it, or under a run-time version of Windows provided with the package.

Windows GRAPH can do several charts per page and offers interactive chart editing capabilities. It has a variety of viewing and layout aids, including ellipse, line, rectangle, and rounded rectangle drawing tools, and five view modes: actual size, current page, full screen, all pages, and previous page. The program also supports Microsoft's Dynamic Data Exchange (DDE) protocol, enabling Windows GRAPH to be linked to other applications. Windows GRAPH can also be used with the Windows Clipboard, allowing the user to transfer graphics and symbols to and from other Windows applications.

$395. Kaypro MS-DOS computers. Micrografx Inc., 1820 North Greenville Ave., Richardson, TX 75081; (800) 272-3729.

A DIRECTORY HELPER

Tree86 is an MS-DOS enhancement program. It makes MS-DOS operation easier and faster by providing a tree-like graphic image of your directory, along with the ability to rename, copy, and erase files, change directories, change file attributes, and much more.

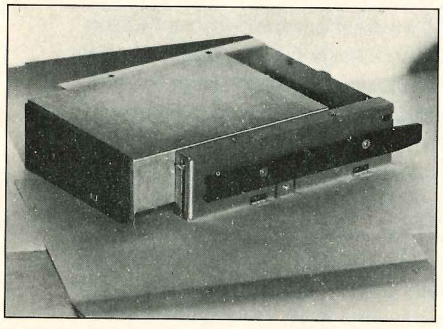
Tree86's interface provides an abundance of options while maintaining an uncluttered, easy-to-view screen through the use of pull-down windows. Choices are displayed across the top of the screen and are selected with a mouse or the first letter of any item.

Tree86 takes advantage of the power and speed of modern hardware. It functions with a mouse or a keyboard, for example, and users with VGA or EGA monitors can choose to select enhanced colors or a 43-line display. Tree86 is fast because it employs dynamic memory allocation, with disk reads triggered only when required for an accurate display.

$49.95. Kaypro MS-DOS computers. The Aldridge Company, 2500 City West Blvd., Suite 575, Houston, Texas, 77042; (713) 953-1940.

REMOVABLE HARD DISKS

The Remedy Series of disk drives offers an economical and flexible means to store up to 50 megabytes of data on a half-height removable Winchester hard disk drive. A Remedy drive can be used as a primary storage device or as a backup system, providing a ready-to-use duplicate in the event of primary drive failure. Both ST-412 and SCSI drives are available.



Remedy has better performance characteristics than the Bernoulli box and has an expected survival of 28,000 hours, versus several hundred hours for a floppy media cartridge. No special adapter card or software is needed for Remedy, and no maintenance is required.

Remedy comes in 20, 30, 40 and 50 megabyte versions, and a special interface option is offered for the Kaypro 2000 computer. A Remedy drive with AT-type mounting rails for direct installation into a Kaypro 286i is pictured here.

$795 to $1,595. MS-DOS computers. Systems Peripherals Consultants, 9747 Business Park Ave., San Diego, CA 92131; (800) 345-0824. In California call (619) 693-8611.

COMPUTERIZED ADDRESS BOOK

WHO is an address list program that can store up to 1,000 entries on a floppy disk and 32,000 entries on a hard disk. It can categorize name or address entries, create sub-lists based on those fields, and transfer data to other systems using ASCII files.

WHO produces several types of printed output: address lists, phone lists, address book fillers, 3 x 5-inch file cards and 2 x 4-inch Rolodex cards, and labels. Alphabetical and zip code lists are available at all times.

$99. MS-DOS and CP/M computers. Robotronics, 7800 MacArthur Blvd., Oakland, CA 94605; (415) 639-7716.

BIGGER AND BETTER HEADLINES

LePrint Headliner is a program designed to produce large type for headlines—up to 720 points (the size of a full page), if desired. These headlines can be used with Xerox's Ventura Publisher and Aldus' Pagemaker.

LePrint Headliner creates graphics files in a PCX format, which can be read by both desktop publishing programs and paint programs (note:

output is available only in this form. The program contains no printer drivers). Once the headline is incorporated into a document, it can be manipulated to combine with text and graphics.

LePrint Headliner gives users total control over type size. The product will produce not only large headlines, but small ones as well—as small as four points. Smaller headlines can be used as subheads. LePrint includes five typestyles: Pica, Courier, Prestige Elite, Times Roman, and Times Italic.

$100. Kaypro MS-DOS computers. LeBaugh Software Corporation, 10824 Old Mill Rd., Suite 6, Omaha, NB 68154; (800) 532-2844.

A CP/M MOUSE

The ProMouse is a mouse input device for CP/M computers. The ProMouse lets you quickly move the cursor across the screen while running an application program such as a word processor. The three mouse buttons can be programmed to emulate frequently used keys.

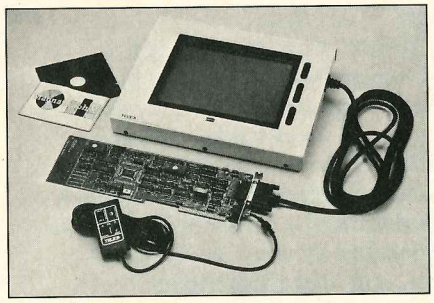
Written in Z-80 assembly language, the ProMouse driver is a memory-resident program; once installed, the driver remains in memory, taking up less than 700 bytes.

The ProMouse package includes a LogiTech C7 serial mouse, a serial port gender changer, and memory-resident mouse driver software. The ProMouse driver is compatible with all major applications, such as WordStar, spreadsheets, graphics applications, and more.

$140. Kaypro CP/M computers. Progressive Products, 1797 Nelson Way, San Jose, CA 95124; (408) 265-5490.

PROJECT YOUR COMPUTER SCREEN

The MagnaByte 5220-I, designed for use with overhead projectors, is an electronic imager that displays color. The 5220-I uses an interface board, a remote control, and a liquid crystal display palette that fits on top of any standard overhead projector. By connecting the palette and remote control to the interface board and placing the opaque palette on the projector, you can project—in color—any text or graphic that can be viewed on a microcomputer screen.



Financial managers can use the MagnaByte 5220-I to examine spreadsheets, graphics or outlines in a staff meeting. Educators can use it to get more out of their computer resources. MagnaByte brings added value to an organization's overhead projectors.

The color MagnaByte system can be used with monochrome as well as color computer systems.

$1,580. Kaypro MS-DOS computers except the Kaypro 2000. Telex Communications Inc., 9600 Aldrich Ave. South, Minneapolis, MN 55420; (612) 884-4051.

CONVERT DOCUMENTS TO SCRIPTS

AVscripter is a shareware program that converts full-screen text to two-column audio-video script format. Working with text files prepared by Perfect Writer, WordStar, and other popular word processors, AVscripter sends two-column output to a printer, screen, or disk file.

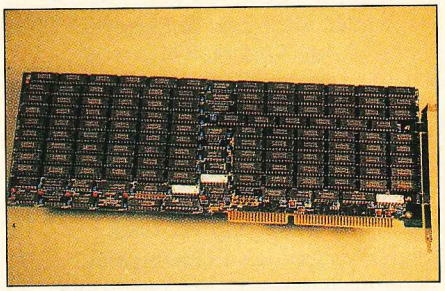
The program automatically numbers scenes and synchronizes audio and video lines. It looks for continued page breaks and adds "CONTINUED"s where needed.

Other features include headers, automatically centered titles, underlining, intermixing two-column and full-width text, sending printer instructions, selective page printing, multiple copies, and file chaining.

$23. Kaypro CP/M and MS-DOS computers. Tom Schroeppel, 4705 Bay View Ave., Tampa, FL 33611; (813) 839-0724.

THE ELEPHANT 12

The Elephant 12 is a memory board that provides a maximum of eight mgabytes of EMS (expanded memory specification), 12 megabytes of extended memory, or a combination of both to any AT-class computer, such the Kaypro 286i.



The Elephant 12 is the first true 12-megahertz board on the market and the first of its kind to feature the new 100-nanosecond, 1-megabit memory chips. It is guaranteed to perform at actual bus speeds of up to 12 megahertz with one wait state.

This board supports Xenix, AutoCad, and Novell. It directly provides extended memory, which will support the soon-to-be-released multitasking operating system for 80286-based computers. The Elephant 12 is bundled with Tele-ware West's Above Disc EMS-memory emulation software, which makes it adhere to the Lotus/Intel/Microsoft expanded memory specification.

$6,095. Kaypro 286i. American Micronics Inc.,17831 Skypark Circle, Suite C, Irvine CA 92714; (800) 443-6315.

THE PERSONAL FINANCIAL PLANNER

The Personal Financial Planner is a complete package of financial services in one easy-to-use Lotus 1-2-3 spreadsheet template. It includes tax, estate, and real estate planning capabilities, investment, insurance, disability, and retirement analysis capabilities, amortization schedules, and interactive personal finncial statements.

Personal Financial Planner lets CPAs quickly and easily prepare financial plans for clients. Its interactive, modular structure lets CPAs enter data once and have it appear on several financial statements. From basic financial data, it prepares a statement of financial condition, a cash flow statement, a 12-month cash flow projection, a five-year cash flow projection, estate tax analysis, life insurance analysis, disability income analysis, retirement needs analysis, real estate analysis, and more.

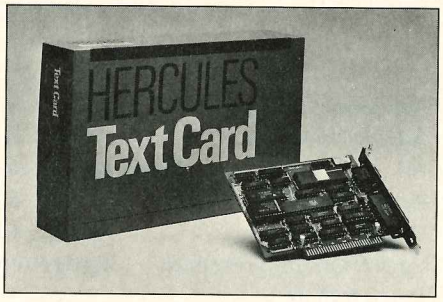
Because it is a spreadsheet template, Personal Financial Planner users can perform "what if?" analyses to easily determine the effects of financial changes. Any or all variables can be changed and the spreadsheet can be recalculated to see the effect, which can be observed graphically using spreadsheet graphics.

$750. Kaypro MS-DOS computers. TaxCalc Software Inc. 4210 West Vickery Blvd., Fort Worth, TX 76107; (800) 527-2669.

A TEXT-ONLY ALTERNATIVE

The Hercules Text Card is a low-cost alternative to the IBM Monochrome Display Adapter. This new card displays text, but not graphics, on monochrome monitors.

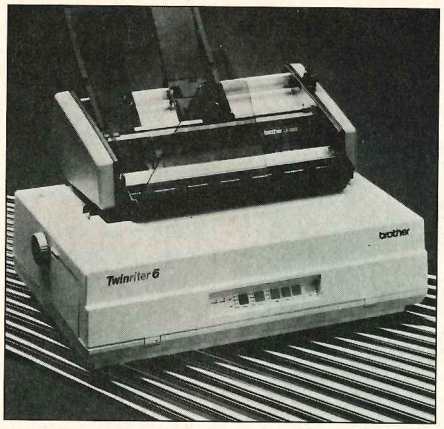
The Hercules Text Card supports all text software programs that are compatible with IBM's MDA, including all popular spreadsheet, database and word processing programs.



$139. Kaypro MS-DOS computers, except the Kaypro 2000 and 2000+. Hercules Computer Technology, 2550 Ninth Street, Berkeley, CA 94710; (415) 540-6000.

TWO PRINTERS IN ONE

The Twinwriter 6 is a printer with a unique design: it has a 36 CPS daisy wheel print head and a 200 CPS dot matrix print head side by side inside the printer. The Twinwriter 6 automatically selects the correct printhead based on the user's need for letter quality text, graphics, or high speed draft printing.



The 136 column Twinwriter 6 supports the IBM extended character set in both letter quality and draft modes. Two optional sheet feeders and a tractor feed are available.

$1889. Brother International Corporation, 8 Corporate Place, Piscataway, New Jersey, 08854; (201) 981-0300.

PRODUCT UPDATES

WordStar 4.0, CP/M Edition offers more than 100 enhancements over the current CP/M version while maintaining the same look and feel. New features include stored ruler lines, macros, and onscreen boldfacing and underlining. MicroPro International Corporation, San Francisco, CA □ **Ready-to-Run Accounting Software** has been upgraded to version 2.1. It now takes full advantage of the advanced programming ability of Lotus 1-2-3 Release 2 (Ready-to-Run Accounting version 1A for use with Lotus 1-2-3 Release 1A will continue to be available). The accounting modules provided are General Ledger, Accounts Payable, Accounts Receivable, Payroll, and Inventory/Order Entry. Manusoft Corporation, Culver City, CA □ The new release of **Backup Master**, version 2.2, can back up data to MS-DOS-formatted floppy disks, as well as Backup Master's own specially formatted ones. Other features include backing up to any MS-DOS device and a preview display. Intersecting Concepts, Thousand Oaks, CA □ **Switch-It** is a task-switching program that enables you to switch from one application to another at the touch of a key. The recently released version 2 features command-line editing and a cut-and-paste facility, allowing the transfer of data between applications. VuSoft Incorporated, Lincoln, MA □ The second release of **Real Property Management**, a property management program, is now available. New features include depreciation and depreciable asset accounting, vacancy and delinquency reports, and unit history reports. It now has Maintenance by Unit as well as Maintenance by Property abilities. RealComp Incorporated, Cupertino, CA □ Release 2.0 of **BYL** (Before You Leap), a knowledge-based software project estimation and scheduling package, has several new features. It now automatically calibrates for job-specific conditions and does function point analysis. BYL still supports up to 48 computer languages and will estimate the size of any software project. Gordon Group, San Jose, CA □

One match can destroy an area the size of Hiroshima.

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ADVERTISERS' INDEX

Advertiser	Page No.
Advanced Concepts E&C	13
Advent Products	22
ATI	Inside Back Cover
Bytel Corporation	65
CDE Software	15
Central Computer Products	Inside Front Cover,1,23,47
CLASSIFILES	54
Computer Friends	9
Computer Professionals, Inc.	5
Cuesta Systems	15
E-Z Systems	67
Hurd Computers Systems	7
Intersecting Concepts	19
James River Group	Back Cover
Kaypro Corp.	2,27,31,61
Kaypro Store	57
PDSC	67
PROFILES BACK ISSUES	45,46
Spectre Technologies	21
Telion Software	7
Traveling Software	61,72
U.S. Computer Supply	29
XPert Software	11

The World's Smallest Battery-Operated Full-function Printer

(which also happens to be the world's best printer value)

This amazing printer weighs only 2.2 pounds (with batteries) and measures 11 by 4.5 by 1.75 inches. With its built-in parallel interface, the TTXpress printer can connect to any of your Kaypro computers including the II, IV, 16, 286i, and the Kaypro 2000 laptop.* We even include a printer cable!

Because of its thermal technology, the TTXpress printer has fewer moving parts for greater reliability. It prints clear text (with true descenders) and graphics on either 8½" roll or single sheet paper at 50 characters per second, and 40, 80, or even 160 characters per line. It is compatible with the Epson MX-80 and prints condensed, enlarged, emphasized, and underline characters. It even supports bit-mapped graphics!

Whether you need a printer to carry in your briefcase or to sit on top of your computer in your home or office, you will not find a better value than our package. We include the TTXpress printer with 4 C batteries, A/C adapter, parallel printer cable, two rolls of paper, and even a leather-like printer cover. All this for the unheard of price of only: **$129**

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*** Kaypro 2000 requires serial to parallel converter.**

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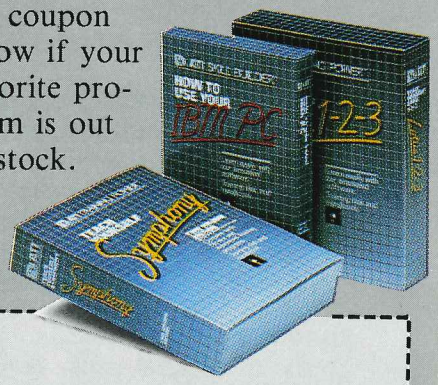

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INVENTORY $125
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ACCOUNTS PAYABLE $125
Allows up to 500 vendors and 600 invoices/mo. Records invoices and handwritten checks. Prints computer checks on any pre-printed form. Keeps vendor names and addresses.

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