Vol. 4, #3 June/July 1987

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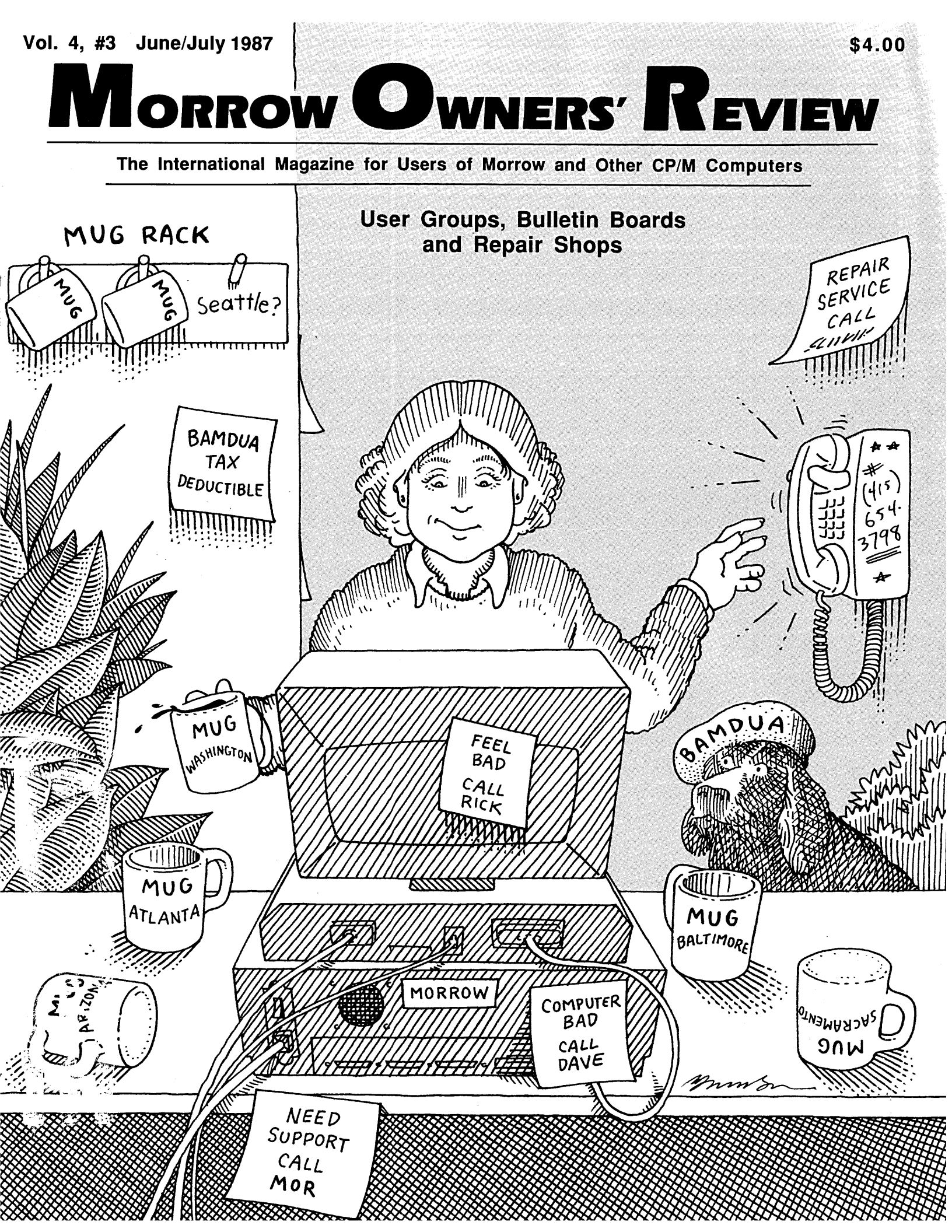
MORROW OWNERS' REVIEW

The International Magazine for Users of Morrow and Other CP/M Computers

User Groups, Bulletin Boards and Repair Shops



This Month — NEW Products, NEW Names & NEW Versions!

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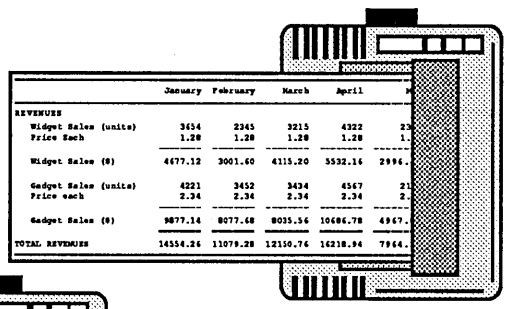
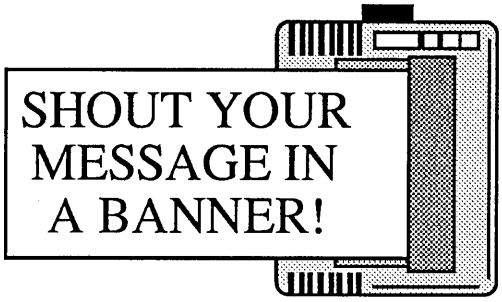


	January	February	March	April
REVENUES				
Widget Sales (units)	3654	2345	3215	4322
Price Each	1.28	1.28	1.28	1.28
Widget Sales ($)	4677.12	3001.60	4115.20	5532.16
Gadget Sales (units)	4221	3452	3434	4567
Price each	2.34	2.34	2.34	2.34
Gadget Sales ($)	9877.14	8077.68	8035.56	10686.78
TOTAL REVENUES	14554.26	11079.28	12150.76	16218.94



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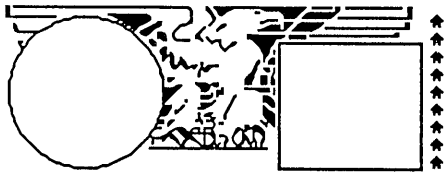


Letters to the Editor

IBM Clone Disappointing

Dear Editor:

I recently helped a friend change from a Kaypro to a Turbo XT clone, and found that I was disappointed with the clone in two major areas. There was less room on the 5 1/4" disks for his programs, due to the enormous amount of space required for the MS-DOS operating system, and the greediness of the MS-DOS programmers in consuming space for their programs. The second area was in speed. In spite of the Turbo's enhanced speed, it takes longer to do a job from beginning to end on the XT than it did on the Kaypro. This convinced me that I would be better served by putting a hard disk on my MD3 rather than change to a IBM clone. I am quite satisfied with much of the CP/M software that I have, and I trust that programmers will not desert the CP/M world altogether.

E.J. Culling
Omaha, NE

WHAT ABOUT NEWWORD?

Dear Editor:

I am writing to tell you that I am concerned about the future of NewWord. I read "The New WordStar" by Serge Timacheff (Vol. 4, #2) and began to wonder what will happen to NewWord in the near future. Will NewWord be necessarily converted to WordStar now that the NewStar Corporation has closed down?

When MicroPro International will stay with WordStar, will they upgrade or abandon NewWord? What are these men from old NewStar going to do with NewWord?

I have written a letter to Mr. Lee Lensky at MicroPro to express my concern about NW's possible termination. I feel NewWord has many advantages over WordStar, of which I haven't seen updates for years. So I want to keep in touch with MicroPro to see if NewWord will remain in existence for a few more years.

I want to let you know I have enjoyed MOR every time I get a new issue. I am also a little worried about Morrow User Groups' problems in keeping the Morrow users up-to-date. It is sure too bad that we have to compete with popular computers such as IBMs and Apples. Please don't lose contact with the Morrow users, otherwise no one else can help them with problems and suggestions. I see that Morrow Designs is in danger of becoming extinct; let's hope it will improve to meet the competition of other famous computers.

Betty Jean Brandt
Long Beach, CA

(Morrow Designs ceased operations over a year ago and is gone forever. Yes, it is a good thing the MOR is still around. We will be there as long as you will be in sufficient numbers to support our service.

As for NewWord: The last CP/M 80 version was 2.17 and you can still get it from MicroPro International for a bit longer. See ***Important Announcements*** *on page 43. That will be it for NewWord, which will be resurrected as WordStar 4.0 for CP/M available by the end of the year. WordStar 4.0 for MS-DOS is already out and most people love it.—Ed.)*

New Company Specializes in Data Conversions

With the large variety of computer formats today, one of the big problems is that they cannot talk to each other. **Data Conversion Services** in Novato, California, is striving to solve the problem. The company has developed an efficient system for converting a client's data from and to over 1,000 different formats. Boasting 24 hour production turnaround and same day nationwide pickup, Data Conversion services all states and Canada.

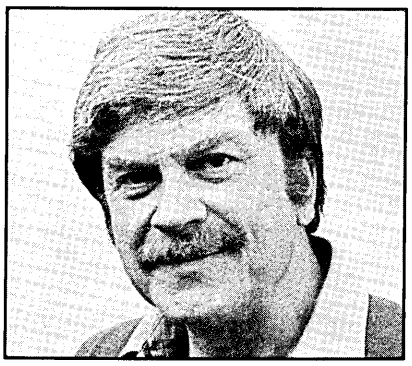
Owner Jonathon Chilvers says the "most popular conversions are from older, dedicated word processors to today's general purpose computers such as from Displaywriters and Wang's OIS to the PC's, AT's and Macintoshes. Also very popular is the downloading of data from mainframe magnetic tapes to floppy disks and data exchange between incompatible computers."

Chilvers added that "we do a lot of Morrow conversions, both with single and double sided formats."

The company has developed proprietary programs that import data directly directly into today's widely used application programs such as Lotus, dBase III and Word Perfect.

Contact Data Conversion Services, 1062 Machin Avenue, Novato, California, 94947, (415) 897-3003 or (800) 327-0330.

Editorial



LEAN, TIGHT AND CLEVER

There are so many exciting things happening in the CP/M world we'd like to tell you about that it's hard to choose where to start. From Europe comes the AMSTRAD computer, a spectacular CP/M machine, about which you will hear more in the next issue. There are new, powerful computer chips coming out that can run your old CP/M programs twice as fast in a memory of 256 KB. Check out the FOREVER-Z column in this issue about Zilog's Z280 chip and the ULTRABOARD for Kaypros. Should we push for such an add-on board for Morrows? Think about it. In the meantime we'll have a few things to say about the virtue and power of limited resources and how that led to that marvelous design called the ON! computer.

In CP/M the memory (RAM) addressing space is only 64 KB. Faced with this limited memory, programmers creating CP/M applications have to be clever. They write code that is lean and tight.

MS-DOS arrived, supporting computer chips with addressing spaces in the megabytes, and code became flabby. As programs quickly grew to enormous sizes, the smartness per kilobyte dropped. Why are the MS-DOS programmers so wasteful? Because with plenty of memory, who cares about lean, elegant code? Isn't memory cheaper than a programmer? We see this same kind of wasteful attitude throughout the culture. It is based on the illusion of unlimited resources. Big industries like IBM support the notion. As we all know by now, there is nothing lean, tight and clever about an IBM-PC.

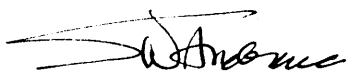
"Wrong way!", says Nick DeWolf, designer of the ON! computer, a machine full of neat, tight design features. Nick flew out to attend the special BAMDUA meeting in Berkeley, California, on April 29th. He was the featured speaker at what turned out to be the first official announcement of the ON! computer. It was a wild and exciting evening, permeated by Nick's passion for beautifully simple and powerfully focused design. See Ted Silveira's ON! review in the April/May MOR.

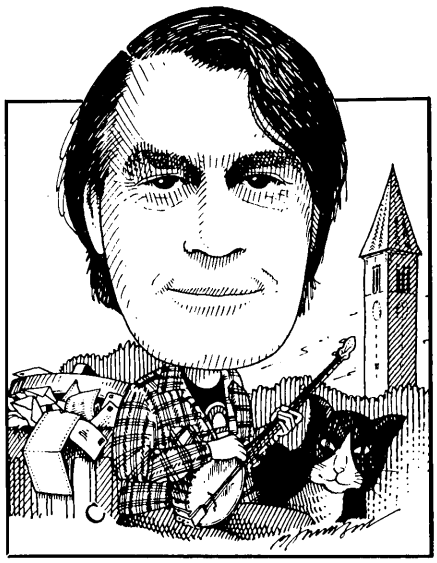
An eloquent speaker, Nick had us either on our toes or in stitches. He told fascinating stories of his design process (700 14-hour days with only two days off!). Throughout he held to his vision of a solid, simple-to-operate but very fast Z80 based computer that could survive heavy power surges. Nick was motivated in part by his disgust with IBM for making fearsomely complex and rather slow PC's, loaded with wasteful overkill technology. When he announced that with the ON! computer design he had declared war on IBM, he drew cheers and applause from the CP/M user filled crowd.

Some call the ON! computer the Volkswagen of personal computers. Nick's design favors solidness and simplicity over complexity. No interrupts, no graphics or DMA (direct memory access). Instead, a 38,400 bps terminal that makes your 9,600 bps terminal look slow; a 2 MB RAM disk to make applications appear in a flash; and a big, fat capacitor in the power supply to ride out power surges that would crash and possibly damage any other computer. And ON! runs ZCPR3, grafted on to the old CP/M 2.2 works, meaning you can run all your CP/M applications on it. CP/M has this memory addressing space limitation of 64 KB, remember? Well, here is where that works to your advantage: You can pack a lot of slim CP/M programs onto a 2 MB RAM disk, where only a few of the elephantine MS-DOS routines would fit. That's the power of limited resources! It makes for lean, tight and clever stuff.

It takes a spirited designer to take on a challenge like this and come up with such a beautiful design. Instead of getting mired in technical overkill, Nick DeWolf has obviously been thinking a lot about the people who are going to use his computer. It's a people's computer! But will it succeed in the market place? The $2500 price seems high compared to that of a good, used Morrow, although it is not far off what we paid for our machines when they were new. Let's hope the ON! computer is marketed as intelligently and effectively as it was designed.

This dynamo of a computer only consumes 25 watts of power, mainly because it has no moving parts to speak of (the floppy drive is hardly used). Not unlike Nick himself, the ON! never shuts down. It doesn't have an OFF switch. Nor does it have an ON light. Can you imagine the midnight cleaning ladies going crazy trying to turn that computer off if they'd find an enticing ON light beaming at them? So Nick left it out. Lean, tight and clever.





From the Mailbox

by Bill Steele

WE have moved the MOR deadlines up, with the result that this issue will have gone to press *before* the previous issue arrived in your mailbox. This means that a question appearing in this column may not get an answer in print until two issues later. If you're really desperate it wouldn't hurt to enclose an SASE with your question; but bear in mind that *I* don't know all the answers, so you still may have to wait for someone out there to reply. And if you have an answer for someone, please don't use the new deadlines as an excuse for procrastination; write in before it slips your mind. One other request, while I'm at it. Often I suggest answers to problems that are just my best guess, not the pronouncements of a deity. If I was wrong, let me know, so we can repeat the question; maybe that will inspire someone to send in the right answer. If I was right, I'd like to know that, too.

James E. Bottom of Salem, OR has a couple of answers for us. First, he has a little more on **John William Johnson's** problem updating the Correct-It dictionary: "I've had a similar truncating problem with the FATCAT cataloging program. I simply had to erase the files and redo, the second time making sure the necessary program files were accessible by FC." He suggests Mr. Johnson and others with the same problem investigate a program called "DICTADD.*" offered by Robert Throckmorton (7144 Predial Way, Sacramento, CA 95842-3720), among a group of "Writing Tools" in a recent MOR ad. The program, which costs $12, adds 7000 additional words to the Correct-It dictionary, and Mr. Bottom suggests that you could add your own word list to Mr. Throckmorton's before running the program. "I sure got my money's worth," Mr. Bottom concludes, "considering the disk also included a well-documented word-counting utility with many unusual capabilities and a patch to allow running Correct-It from the No-File Menu as if it were SpellStar."

Mr. Bottom also has more on the secret identities of terminals: "Laurence Moore stated he believed he might have an ADM-31, not a Zenith, hidden behind his MDT-60 screen. I believe what the dealer and Morrow may have meant was that his terminal emulates an ADM-31." He cites a section in *Dave Block's Preliminary Question and Answer Book*, explaining that Morrow sold terminals with three levels of capability, the highest being Level III, or ADM-31 capability. The message you got on the screen when you installed your original CP/M distribution diskette, he points out, declared that "You have a Level III terminal...Any programs not supplied by Morrow Designs must be installed for an ADM-31 terminal." To that I would add that installing for an ADM-31 isn't always the best choice; for instance, as pointed out in a previous column, installing for a TeleVideo instead may cure the problem of WS losing characters on word wrap.

On learning that the Morrow MP100, 200 and 300 printers are essentially Silver Reed EXP 500, 550 and 770, **Peter B. Clarke of Des Plaines, IL** sent along a price list from a local distributor offering the Silver Reed printers at $449, $649 and $995, respectively, along with tractors, cut sheet feeders, printwheels and ribbons. This list says all three printers are available in serial or parallel versions, which doesn't jibe with the spec sheet I've seen, but when did we ever get consistent info in this business? Mr. Clarke says he is a professional consultant, and would undertake to get any of the above for MOR readers at ten percent off retail plus shipping. His address is 1665 Greenleaf Ave., Des Plaines, IL 60018-3832, (312) 297-3589.

An interesting problem came in over the phone from **Lewis Parkhill of Tishomingo, OK**: His bank repossessed an MD3 with a Teletext 1010 daisy wheel printer, which happens to be what I have. When he hooked up the system at the bank it worked fine. When he took the printer and the WordStar disk home and tried them with his own MD3 they didn't

*We're more on our own than ever, so if you know a solution to a problem, don't assume someone else will write in; there are not so many of us that you can count on that. Whether you have questions or answers, keep them coming: **Bill Steele**, P.O. Box 782, Ithaca, NY 14851, 607/273-2132; MCI: WSTEELE, 254-5833.*

work at all. The printer spat out odd characters here and there and lots of form feeds. We checked the printer and terminal installation over the phone and it was the same as mine–draft printer and ADM-31 (as above). What was different? Only idea I could come up with: the previous user was using a strange printer cable and had changed the output port jumpers inside the computer. Any other ideas? Incidentally, I have a list of WS patch points for that printer for superscript and subscript, alternate pitch, etc., if anyone needs them. (Also see next paragraph.)

Rebecca Anderson in Eugene, OR bought an Okidata 93P printer via mailorder and now "When I approach our local computer store they do not seem to want to help." Well, it's entirely reasonable for them not to want to support equipment bought somewhere else; what we have to do in return for low mailorder prices is learn how to do stuff for ourselves. Fortunately, it's not that hard (although it sometimes takes a long time to explain). Ms. Anderson's problem is that she can't get WordStar to turn on the printer's various options, like superscript, subscript, condensed and boldface, although WS has embedded commands for these features. This is an old subject, but bears repeating. A printer's features are activated by sending a code sequence in the stream of characters going from the computer to the printer. When you place print commands in a WS (or NW) file by typing "^P" followed by a letter from the Print Controls menu, WS translates these into the sequence your printer expects *if* it knows what that sequence is. If your printer is one that appears in the installation menu, it will know at least some of them (there aren't enough print controls to handle all the features of some printers, so you may want to change the installation, depending on what features you use most often). For the rest, or for printers that aren't on the menu, you have to patch in the codes yourself. Look in your printer manual to find out what sequence must be sent for each feature--probably it will be an ESC character followed by some letter of the alphabet. For instance, "ESC D" might turn on 15-pitch printing and "ESC E" might turn it off. Then, convert each character of the sequence to the hex value of its ASCII code. "ESC D," for instance, comes out "1B 44" in hex. There's a nice table for this in Appendix A of the BAZIC manual. Now, check the printer patch area listing in the back of the WordStar manual to find the addresses at which you must insert these codes. In my manual it starts on page F-8. It looks scary and complicated, but all you really need are the addresses down the left side of the page. I find, for instance, that the code for alternate pitch (what will be sent to the printer when you type in "^PA") goes at address 06B6 (the addresses may differ in different releases of WS). To make superscript and subscript work you must patch in the codes for half linefeed and negative half linefeed at the locations labeled ROLUP and ROLDOW — 06BF and 06C4 in my version. You can put the codes for condensed print, italics or whatever else you want into the four "USR" addresses, which represent the toggles Q, W, E and R, respectively. The string for alternate ribbon color (Y) doesn't have to be used for that; you can patch some other print enhancement into it. One trick that works for some printers is to just patch ESC into one toggle, say Q, then enter that toggle followed by the next letter of the escape code into the text. Use the other toggles for printer control strings that don't begin with ESC. Note that to patch in "ESC D" at one of these locations you would actually patch in "02 1B 44." The 02 tells the system that the sequence is two bytes long. You do all this patching with the Install program on your distribution disk, variously named INSTALL.COM, INSTWS.COM, WSINSTAL.COM, etc. Read the manual to find out how to use the patcher. If you know how to use DDT, you can also use that for the patching. NewWord is patched in the same way, except that the patcher lets you enter characters directly, without having to convert them to hex numbers.

One final hint: look for a user's group in your area. In their public domain library they may have SUBMIT files that will automatically (almost) patch WS for your printer. *(The product "WordPatch" from CMB3 Technologies does just this. It is available in a variety of formats, including Morrow. Call them at (800) 622-4070 or (800) 942-7317, or write to P.O. Box 3061, Walnut Creek, CA, 94598. See product review on WordPatch in this issue. — ED.)*

Joseph Gottlieb of West Palm Beach, FL says his MD-5H has been working fine for five years, but it gives off a hum, which he believes is made by the hard disk drive. "At times, the hum seems to fluctuate a little and increases in intensity from time to time. Seems like it may be off balance, if such a thing is possible." He wonders if this is a problem or is normal? I dunno, being a floppy person myself (a real problem on windy days). My drives certainly hum when they're running, and of course a hard disk spins all the time. Mr. Gottlieb also asks where to go for repairs in his area. The list of repair shops in MOR Vol. 3, #4 includes only one in Florida, the Xerox center in Altamonte Springs. *(Note the updated repair shop list on page 35 —ED.)*

Gary Hines in Twain Harte, CA asks if there is a way to search for a specific string in SuperCalc as you can in Logicalc. He notes that a review comparing the two programs says that SC has "search and jump" capability, but he can't find anything about it in the manual. Come to think of it, it wasn't in the Logicalc manual either, except as an addendum in later editions; Stan Ahalt made us aware of the feature in this column. But note that the comparison of features was written by the SuperCalc people, so they may have been puffing a little on the GoTo command. ■

Forever Z

By Rick Charnes

HELLO, Z fans...
Due to the large number of extraordinary new software and hardware developments in our world, this is going to be a "newsy" column.

First: folks in the San Francisco area are in serious beta-test of support for quad density drives for the Morrow Z-System. This is something not provided for in the original Morrow BIOS. If you desire more disk space but you've been holding off on buying that Mini Winnie hard disk for fear of creating a too-large hole in your bank account, an easy solution is to go with quad density drives. A quad density Morrow disk will hold 768k worth of files. Not as popular as they should be, they can be purchased for approximately the same price or just slightly higher than the ordinary DSDD drives. They're perfect for our Z-System which likes to have a large number of files available on-line. The best way to get one or two to either add to your two-drive system or to replace one of your existing drives is by mail order through something like the *Computer Shopper* newspaper, available at newsstands everywhere. Work on the MD2 version of our Morrow bootable disk has also begun; interested users should contact the MOR office.

Next and most importantly, as if having available to us the new CP/M-compatible Hitachi HD64180 chip, the Z-System world is now abuzz with excitement about the new chip just released by Zilog, four years in the making, the Z280. The Z280 is downward-compatible with our Z80s, addresses one megabyte of RAM directly and is capable of addressing 16 Mb with operating system support, and runs at 16 Mhz. The really big news: an add-on board for the Kaypro computer is in beta test and as of this writing (early April) taking advance orders for release in the summer. Called the ULTRABOARD this is one of the biggest developments in CP/M-compatible hardware technology in years. It is produced by High Tech Research in Redding, CA, the manufacturers of the Kaypro memory-resident Handyman add-on board/utility. Cost will be under $500. Installation requires nothing more than pulling out one's Z80 chip, replacing it with the new board, and attaching a new cable.

There is a description of the product, released by the Kaypro users group at the West Coast Computer Faire here in San Francisco floating around the BBS circuit called ULTRA.INF in which it is claimed that it "makes the ULTRABOARD-equipped CP/M Kaypro the fastest, most powerful personal computer available today." This claim isn't far from the truth. The Z280 chip easily approaches the MS-DOS-compatible 80286 microprocessor in speed. It has on-chip virtual memory and cache memory, and a user-configurable RAM disk. It comes with a replacement for the Kaypro screen driver that makes it 25 times faster than the current terminal, and comes with an optional color monitor with which one can design one's own character set. The ULTRABOARD has 1 meg ROM capacity, making it possible — again, with operating system support — for programs such as WordStar to remain **in memory!** Can you imagine being able to access your word processor from any other program at the touch of a key? This technique is approached with software by Backgrounder II, which I'll describe in a minute, that stores your first application on disk rather than in memory. All presently-existing CP/M programs are fully compatible with this new chip, but run with incredible speed.

Rick Charnes bought his MD-2 many years ago when he thought of himself primarily as a writer. Now a self-admitted fledgling technical type, his computer has turned from tool to toy. His immense love affair with ZCPR3 leaves some occasional time for mundane things like work. He is president of BAMDUA.

I mention this product not because it is likely that some enterprising company will manufacture a comparable product for our Morrows. Its significance lies simply in pointing to the fact that despite popular impression the CP/M-compatible world is not just "holding on" or "still here" but making bold new advances. There is little doubt given the low cost of this new chip and its minimal power consumption that new computers will be manufactured with it as its processor. The fact that Zilog has indeed developed it is proof of trust in the ability of the marketplace to support software for it. Though all presently existing CP/M programs will run, the real potential for both the Z280 and the HD64180 will come when Echelon finishes its operating system for these chips. CP/M itself — Digital Research's product — cannot support the *extra* features of this chip, but the new Echelon operating system can. There is little doubt that when we have the OS we can expect software to be written. If and when we are able to find someone to rewrite the Morrow BIOS for the Z80's brother chip, the HD64180, we in the Z-System world and unfortunately not our CP/M brethren will be positioned to be in the forefront of these new developments.

High Tech Research can be contacted at (800) 446-3220 or (800) 446-3223 in California.

Who knows what riches our future holds? The superb MicroMint GT180 computer, running Z-System, the HD64180, and Borland International's Graphix Toolbox, is capable of color graphics superior to the Macintosh (see *Byte* magazine, Oct.-Dec. 1986). Our April meeting of BAMDUA here in San Francisco is featuring a demonstration of the extraordinary new all-RAM disk-based ON! computer, running, of course, Z-System. The development team at Echelon, consisting of four programmers, is estimating a September release date for their large-memory operating system, to be called ZOS, for the HD64180 and the Z280. Echelon is in contact with software developers to begin the process of writing new applications —as opposed to the utilities of which we have such a large number and quality — to run in this extra memory. There is already a version of BASIC called 64180BASIC for this chip with full multi-tasking between programs, and rumors fly past my ear right and left of LOTUS 1-2-3 and DBASE III work-alikes. And if you can imagine the kinds of things you could do with a 15k Flow Command Package you'll get some idea of the possibilities opening up.

We are at a crucial moment in our CP/M-compatible world. The economic success of all these various software and hardware ventures, and whether we can keep our world viable alongside the more powerful MS-DOS universe depends, quite literally and directly, on the willingness of each of us using Z-System to make and maintain a commitment to what we are doing and to the projects we are undertaking. Every contribution from each user — a small but nifty alias or ZEX script developed and released to others, a bit of generosity shown on a BBS, a phone call of appreciation to a programmer whose program you liked — these are the things that make our world. This Z-System is an extraordinarily high-quality undertaking, some might say experiment, in which we are involved. It deserves to succeed, and succeed well.

In this regard it becomes especially incumbent upon us to keep up with this rapid forward motion by making the required adaptations to the Morrow BIOS. Interested programmers are very much urged to contact me.

Enough about chips and operating systems. Echelon has released the long-awaited ZCPR3.3, which we at MOR should have available by the time you read this. Among the new features are the ability to have an error handler and extended command processor simultaneously, automatic installation of new programs (no more Z3INS!), direct access to extended command processing without current directory or PATH search, and smoother running of ZEX scripts from shell programs such as VFILER. I've been running an early version of this for several months; it's excellent. Contact the MOR office about upgrades.

Now to programs. What has been described as "the most revolutionary development in CP/M since ZCPR3" is a piece of software called Backgrounder II developed by Plu*Perfect Systems in southern California. It gives us "non-concurrent multitasking," with which a user can switch ("swap") back and forth between two programs without exiting either one, and potentially cut and paste data between the two as well. A single keystroke suspends operation of one application and moves into either another program or a large set of available resident commands. The same keystroke returns again, often to the exact point from where you left off.

Developed by Bridger Mitchell, one of Echelon's team members for the large-memory operating system, BGII is available for CP/M 2.2 or Z-System machines only; it is not compatible with CP/M 3.0. It is fully integrated with all ZCPR and ZRDOS features. Since the speed of the swapping depends on the media, it is not fully practicable on floppy systems. Swapping on a RAM disk takes 0.5 seconds, on a hard disk somewhat longer. If you've been considering joining the MOR group purchase of the Mini-Winnie, seeing this in operation may convince you. To try it out on your system, there is a demonstration program available on BBS's called BGII-DEM3.LBR which lets you test it out on your A: drive only. There is much discussion about this program on the Z-Node circuit. The full program is available for $75 either from Echelon or from Plu*Perfect Systems directly at Box 1494, Idyllwild, CA 92349. I am working on trying to get us a bulk discount on this, but I cannot promise anything. A long and detailed review

of BGII is available in a file called KUGEL.DZC on all Z-Nodes.

Another product available from Plu*Perfect, and one that opens up great possibilities for Morrow owners, is DateStamper. For too long we Morrow-ites have languished without one of the real niceties of the IBM computers — a real-time clock. This was for one very good reason: we had very little software to support it, and there really was no advantage to it. Well, that situation is now over for Z-System users only (not CP/M). DateStamper is the program that reads the information from your clock and sends it to any program that supports it. We in the Z world now have a number of programs that support time and date stamping of files. DateStamper comes with a version of SD.COM, the super directory program, that provides this feature. We also have a version of VFILER, the general file manager most of us use daily, and a PIP-equivalent copy program called PPIP, both of which will copy the date and time over with the copied or moved program. An overlay is now available to read the time from DateStamper into PRINT.COM as well, and I see on the Z-Nodes new programs coming out on an almost weekly basis to provide date-and time-stamping to other utilities.

Fellow columnist Mike Allen has been doing a lot of tinkering with a real-time clock he is building from scratch components. Perhaps if enough of us nudge him he can make something available commercially to us in some manner. The only clock I'm aware of commercially is the Kenmore Z-Time, which unfortunately runs for $100 fully assembled. Now that we have the software to support their features, it is time for us in the Morrow world to make a real-time clocks part of our regular and daily repertoire. I would like to hear thoughts from other users on this matter, especially those have installed a commercial clock in their computer.

Odds and ends: if anyone is having trouble getting WordStar's print functions to work, simply re-install with INSTWS.COM, taking care to manually re-select LST: as the CP/M List Output Driver. For those having trouble installing their terminal, MOR now has a new TCAP file with all the Morrow terminals. The MDT-20 seems to be giving occasional people problems — for help with this contact the MOR office. Lastly, both SuperCalc and CORRECT—IT can be made to work properly from any directory on a hard disk with the PUBLIC directory feature; get in touch with me for this. Also don't forget the MOR BBS (415/654-3798) for these kinds of problems.

I'd like to discuss another superb way for owners of floppy systems to cram as absolutely much as possible onto a single disk. Last column I mentioned using ARUNZ as one's extended command processor, and then writing aliases into ALIAS.CMD. This avoids taking up the 2k space that a free-standing alias unfortunately uses up. The other space-saver we have is in the form of a program called LX.COM, for Library Execute. Many of you will remember, back from our good old CP/M days, a program called LRUN. It was fine for what it did but its ZCPR3 counterpart is superb. LX stands for Library eXecute and allows a user to pack a number of ordinary COM files into a single *.LBR file and then run these from outside the library, from the operating system command line, without extracting them. Because of the way libraries eliminate wasted disk and directory space, this is a tremendous space saver and will be perfect for when MOR releases the Z-System for Morrow single-sided machines.

For instance, the ZCPR3 program QUIET.COM is actually only 1/2k in size. However, due to the way there is a minimum "block" size on our disk operating systems, this file existing alone on a floppy disk occupies 2k of space. Put inside a library, however, it occupies just what it should: 1/2k. Or if a file is really 4 1/4k in size, it would by itself occupy 6k. Put a large number of these inside a library, however, and it is easy to imagine the savings in disk space.

You simply make a library file called COMMAND.LBR which is the name LX.COM will look for and put in along your "path" -- traditionally in A15:. Into this file put as many COM files as you like. In Echelon's beautiful new catalog the author describes his COMMAND.LBR as containing 50 to 60 COM files, thereby saving over 100k of disk space!

Now the trick to really save space on those floppy drives: a superb and rather magic combination of ARUNZ.COM, LX.COM, COMMAND.LBR, and ALIAS.CMD. Your ALIAS.CMD, by the way, should be getting really crowded with aliases by now; it's probably your most important self-created ZCPR3 utility. (Remember, the best source of already-created aliases is on the nationwide Z-Node network or the MOR BBS.) You can make use of both your aliases which you've put inside ALIAS.CMD and these library-packed COM files while still keeping ARUNZ as your extended command processor! Here's the trick: for every COM file you have inside COMMAND.LBR put an "index entry" in ALIAS.CMD — which can contain an unlimited number of entries — pointing to it.

For instance, say you've put XDIR inside COMMAND.LBR. You simply create an entry, "XDIR LX XDIR $*." Now here's what happens: you're on the command line and you type "XDIR *.DOC /P" and hit the carriage return. Your "command processor" looks first on the current directory for a standalone file called XDIR.COM. You of course don't have one since you've hidden it safely away inside your COMMAND.LBR. It then searches your self-defined "PATH" and still doesn't find it. It then says to the extended command processor, "OK, ECP, it's

your job now. I give up." OK, let's see...who's playing ECP today? Right, ARUNZ. ARUNZ says, "OK, command processor, thanks." ARUNZ throws the ball to its own ALIAS.CMD and starts looking again for something called "XDIR." Aha! There it is. It finds the XDIR entry. "OK, entry, what do you want me to do with this?" It sees the entry: "LX XDIR $*". The "$*" means "take the whole command tail (and not just one or two parameters— very important to include this symbol), so its sends "XDIR *.DOC /P" over to LX which finds XDIR and runs your entire command line.

Be sure to make an individual entry inside ALIAS.CMD for each and every COM file inside COMMAND.LBR. Don't worry if you have 50 or 60 along with all your aliases as well -- it can handle these with ease. My ALIAS.CMD is 28k right now! It's quite a sight to behold these in action. You'll have fun experimenting with this technique, and the disk space saved is quite amazing.

By the way, feel free to contact me at (415) 826-9448 or 821-4345 if that number is busy. I very much enjoy shooting the breeze about your experiences with this extraordinary operating system. Z you next time... ◘

The 1987 West Coast Computer Faire in San Francisco, held March 26 through 29, attracted thousands to the Moscone Center to see what's new in the industry. While show's main focus was on DOS and Macintosh systems, the CP/M market was far from ignored. CP/M software was available from some vendors, as well as other types of equipment and peripherals.

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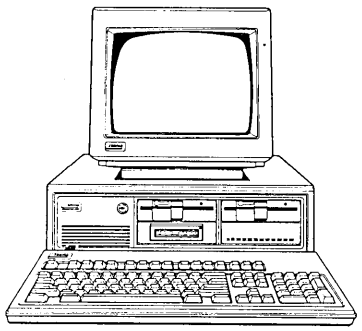

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Tools for Tyros

by Mike Allen

IT just suddenly occurred to me that I have been writing this column for over a year. The amazing thing is that, while I've tried to get as much information across as possible, there is so much information still to go. I've enjoyed it so far, and I hope you have too.

Let's quickly review what we've covered so far. We know that our system consists of the computer itself and peripherals. The computer has three parts — the CPU, memory and I/O. The CPU takes instructions from memory and executes them. I will work on data from memory or from the I/O. It will put results either in memory or to the I/O. The peripherals are those things that communicate with the CPU via the I/O. These are such things as your terminal, disk drives, printer or modem. We found out that I/O comes in two flavors; serial (one bit at a time) and parallel (8 bits at a time). We discovered that serial I/O has a speed called a baud rate and that the computer I/O and the device with which it is communicating must be operating at the same baud rate. If not you get something like playing a 33-1/3 record at 78. No transfer on information. We also learned about handshaking where the peripheral and the I/O can tell each other that the data transfer is going OK.

We then progressed into the operating system, CP/M, and its family of utilities. We learned the difference between resident and transient commands. We started getting familiar with using those commands.

Well, where shall we go from here? Let's connect some of this stuff up. I'll assume that most of you have figured out how to connect the terminal to the computer. The thing to remember is that any Morrow machine hot out of the box is set up to communicate with its terminal through a serial port (another name for an I/O channel) at 9600 baud. Make sure your terminal is working at the same speed.

The next thing to do is connect the printer. The first thing to do is see what kind of a MicroDecision you have. If you have a MD-1 or a revision 1 MD-2 or MD-3 you have NO parallel port and you MUST connect the printer to the remaining serial port. How do you tell if you have a rev. 1? Easy. When you first turn on your machine it puts a message on the terminal including the ROM version number. If your machine say ROM 1. something then you have a rev. 1 machine. If it says 2.something or 3.something you have a rev. 2 machine which has a parallel port. Remember this is for floppy machines. All hard disk machines have a parallel port and three serial ports.

If you decide to use the serial port for your printer you must make sure that the printer and the computer are running at the same baud rate and use the same handshaking. The floppy Morrows run up to 9600 baud and the MD-HDs will go to 19200. You will want to run as fast as you can and still get reliable printing. Many printers that use serial interface have selectable baud rates. An Epson MX-80, for instance, will go to 9600 but you may not get reliable printing above 4800. Other printers have just one baud rate, usually 1200 baud. Set your printer up to the desired speed and then set your Morrow to match that speed. How do you do that? Well, with the MD-1 and the rev. 1 MD-2s and 3s you have to open the machine up and set some switches. These are teeny-weeny little slide switches known as DIP switches. Your book will tell you which switch to set in which position for what speed. (HINT: an easy way to move those switches is with a retractable ball point pen. With the point retracted the end of the pen will just fit over the switch and moving it is a snap.) With the rev. 2 machines and the MD-HDs it's much easier — you run a program called SETUP. All you do is press the appropriate keys and things are done for you. You tell the machine if your printer is on the serial or parallel port and if it is on the serial port you tell it what speed and what kind of handshaking to use. The version of SETUP for the MD-HDs is kinda cute. It actually puts a picture of the back of the machine up on the screen and shows the different ports connected to the terminal and the printer.

If you have both serial and parallel ports you'll probably want to put the printer on the parallel port. Why? First of all, most printers come set up for parallel and adding serial is extra money. Second, it is, in general, faster and more reliable. Third, it leaves your serial port free for other goodies. Other than printers there aren't too many things you can get that run of the parallel port. However there are lots of things you can run of the serial port, for instance a modem or a plotter.

*Send your questions and comments to **Mike Allen** at 400J Summer Wind Way, Glen Burnie, MD 21061.*

Another thing to consider is that most of the high speed printers are "dot matrix." That means that instead of printing a letter like a typewriter does, it has a bunch of little rods (called pins) that smack through the ribbon in various combinations to make your letters. This is faster and lots of neat things can be done with dot matrix printers, but they don't look as nice as a "letter quality" printer that makes the letters like a typewriter (or even better).

Most letter quality printers are of the "daisy wheel" type. That is because the actual type is on a little disk of plastic or metal that spins around until the proper letter is in position and then a hammer hits is from behind. Each letter is on a small tab which makes the disk look like a daisy — hence the name daisy wheel.

Letter quality printers are normally quite slow, around 10 to 20 characters per second; although, if you want to spend the cash, you can get them at 45 cps and up. Dot matrix printers, on the other hand, really fly. My old Epson MX-80 runs at 80 characters per second and the newer printers run at 160 and up. Several writers that I know have one of each. The dot matrix for draft copies and the daisy wheel for the real thing. *(Another option is the "near-letter quality printer" that is actually a dot matrix printer with better resolution. You can print in a normal dot matrix form if you want speed and in the high quality mode if you want quality. Some even offer more than two modes, and the quality of these printers, for example the IBM Pro-Printer, is quite good. —Ed.)*

If you had to swap cables, changing printers could get tedious. With the MDs it's really quite simple. You put the dot matrix on the parallel port and the daisy wheel on the serial port. You normally have the system configured with the parallel port as the printer but when it comes time for the final product you run SETUP and switch the printer to the serial port. Simple, easy and useful.

Some of us have more peripherals than we have ports. For instance I have a printer, a modem and a plotter. What do you do then? The best route is to buy a device called an AB switch. You can buy them for both RS-232 (serial) and Centronics (parallel) ports. They normally run $40 to $60 but if you shop around at some of the computer swap meets you can find them for about $20. What do they do? Well, they just switch two different devices to your single port. In my case both my printer and plotter are parallel devices so I run the parallel port to the AB switch. Then I run the A side of the switch to the printer and the B side to the plotter. There is a knob of the front that says A or B (hence the name AB switch). When I throw the knob to the A position I output to the printer. With the knob in the B position the plotter gets to work. There are some fancy devices out there that switch multiple computers to multiple printers and many other things besides but they aren't cheap and I am!

Hooking up and using a modem is a whole column in itself. I will get to it, but it's a little way down the line.

Most of you didn't buy a computer just for the hell of it, you bought it to use. To do so, you need programs that do what you want to be done. One of the main reasons I bought my first Morrow was for all the programs, or software, that came with it. If at the time I had tried to buy all that software at list prices, I would have run up almost the amount I paid for my Morrow. Well, what did we get?

Word processing. These are the programs that let us work with words. We can type letters or articles but more than that we can easily correct errors, move whole paragraphs around, underline, bold and italic print (depending on your printer) and other neat things. And we don't put a thing on paper until we're happy. On top of that we can check the spelling. I'm the world's worst speller. I used to hide it with worse handwriting but now I can't. But with the spelling checker I don't have to. As a word processor we got either WordStar or NewWord, both fine products. We got Correct-It as a spelling checker, not the fanciest in the world but quite functional. And many other products exist.

DataBase Management. Well, what in the world is that? What we can do with a DBM program is store and organize information. We can then extract that information based on different criteria and even work on that data. Then we can print out the results organized the way we want them. Personal Pearl was supplied with the Morrows. It is not the most elegant DBM program going, but it is relatively easy to use and quite functional. I say relatively easy to use because it can be confusing but compared to one of the most widely used DBM programs, dBase II, it is simple. (I once saw dBase II described as *user hostile.*)

Spreadsheets. The bane of American industry, the bean counter, loves spreadsheets. The most common use of them is financial, but they can be wonderful "what if" devices. You can set up a bunch of columns and rows, organized into "cells," and put data, formulae, decision makers and what-all into the different cells. Then other cells can show what is the result of what you did. You can change a cell and see what the result is down the line. I have seen the various income tax forms put into one of these programs. Then you could see what the effect of different options would be on your net tax. There are also all sorts of engineering functions that can be done with them. Supplied with the Morrows was either SuperCalc or LogiCalc. Both have their pluses and minuses but are very similar with, in my opinion, SuperCalc having a slight edge.

Programming languages. If you feel that you really have to make your machine do something other than what can be done with the supplied

software, you'll have to acquire new software or write it yourself. Very few of us are accomplished enough to write assembly language programs (although it is easier than you might think) but writing in a "high level" language is something else. We were supplied with PILOT and BASIC. The version of PILOT we got was actually written at Morrow. It is a simple, easy to use and surprisingly versatile language. It was designed to work with text and be very user interactive. You won't do any fancy scientific work with it (it only adds and subtracts and only with whole numbers) but remember your menu system was written in pilot and all the initial software installation was done with a pilot program. BASIC is a language that is easy to use and can do all sorts of scientific work. Trigonometric functions, floating point numbers (very big to very small and not limited to whole numbers) and a pretty full set of math functions. It can also work with test, but not as cleanly as PILOT. We all got two versions of MicroSoft BASIC, MBASIC and OBASIC. MBASIC is the latest version. OBASIC is an older version supplied because some programs written when the old version was current won't run on MBASIC. Some of us also got a version of BASIC called BaZic. I've played with it a little and it looks to be somewhat more capable that MBASIC, but is "nonstandard" enough to be troublesome.

I'm going to throw in an editorial at this point. I do NOT recommend that people just starting out to learn programming use BASIC. I have found that if you ever want to progress beyond BASIC that you'll have picked up so many bad practices from using BASIC that learning a new language is worse than starting from scratch. If you want to learn to program I suggest you buy Turbo Pascal from Borland, Turbo Modula-2 from Echelon or 'C' from MIX. All are quite a bit less than $100 and the root languages, Pascal, Modula-2 and "C," are used extensively in industry. BASIC is OK if all you want to do is write an occasional, simple program. If you have the urge to go beyond that, don't even start with BASIC but go with one of those I've mentioned.

I'm kind of winding down, but I have to clarify part of my column in Vol. 4, #1. There was a line about using the AUTO program on a disk other than the one where AUTO resides. The line should have read:

AUTO *B: NW<cr>

Somehow the space between the ':' and the 'N' got left out and it won't work properly without the space.

Next time we'll talk about installing software. The Morrow people did most of it for us, but it's nice to know how if you want to change things.

GRAPHS WITHOUT GRAPHICS?

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— — Morrow Owners' Review, April/May 1986

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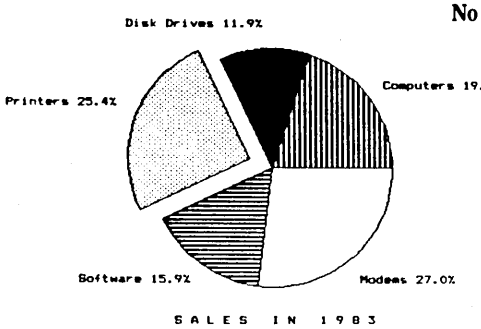

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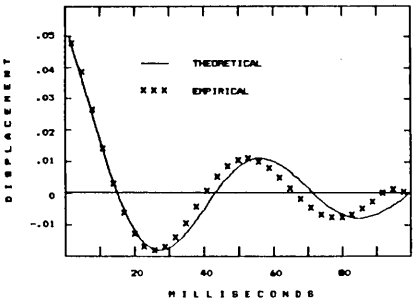


Double Your Columns, Double Your Fun

Using "ToColumn" to Print Two Column Text With Your Word Processor

By Phil Hess

WORDSTAR and NewWord were not designed with two-column printing in mind. This is evident from the late addition of even simple column block commands to both programs. As a result, any two-column printing performed by either program is more a tribute to the cleverness of the user than to the creators of these serviceable programs.

There are clever ways of tricking WordStar and NewWord into printing more than one column of text per page. One way is to format the entire document to the desired column width and boost the page-offset on even-numbered pages, then roll each sheet of paper through the printer twice, once for the left column and a second time for the right column. This double-printing can be done either by reverse line-feeds if your printer is capable of this or by manually inserting each sheet a second time. WordStar and NewWord don't realize that they're printing two columns, and technically they're not. Actually they're only printing two rather narrow pages on different sides of the same sheet of paper.

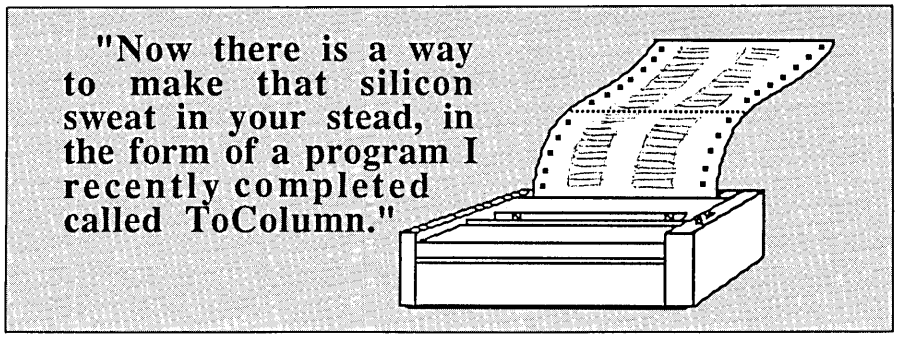
Another way of simulating two-column printing is by using the column block commands to move each even-numbered page to the right side of each odd-numbered page. Pages one and two in the original document then make up columns one and two of page one in the final document, and so on. This document can be printed on any printer without needing to roll the paper through the printer a second time.

The Trouble With Doing it by Hand

Unfortunately, both of these methods have their shortcomings. The first works well enough if you don't mind standing guard over your printer to make sure that each sheet is inserted and aligned properly before the next page begins printing. It also more or less requires that you print only the final draft in two columns since any addition or deletion of lines means that you have to go back through the document and make sure that the .PO commands are at the very beginning of each page.

The column-insert method definitely requires that you have your copy finalized before printing in two columns since any change which moves even one word between lines will be almost impossible to make since this will affect the other column as well. Furthermore, this second method also requires that you go through the entire document and turn off any print controls which are still on at the end of a line and turn them on again at the beginning of the next line. Otherwise these print controls will affect adjacent lines in the other column since the document will be printed line-by-line across columns instead of down columns as in the first method.

A final strike against this second method is that documents must be printed with microjustification off. Again, this is because WordStar and NewWord don't realize that they're printing two columns and attempt to microjustify across the entire line, making a mess of your nice columns. This is a big disappointment to anyone with a printer capable of microjustification.



Phil Hess lives in Lafayette, Indiana and writes regularly for the BAM-DUA Newsletter.

The biggest problem with both of these methods, however, is the tremendous amount of work involved. Try printing twenty or thirty pages this way some evening. It'll have you worked up into a lather in no time.

Is There No Better Way?

The question naturally arises then from the frustrated user: "Can't the computer do some of this work? Why is it always up to me the moment we run into something unexpected?"

Now there is a way to make that silicon sweat in your stead, in the form of a program I recently completed called ToColumn. ToColumn solves all of the problems inherent in the manual methods as well as adds a few new features of its own. And of course it does it all automatically.

In a sense, ToColumn is similar to the manual column-insert method in that it builds a multiple-column page image from single-column pages. The output of this process is a multi-column document which can then be printed as usual by WordStar or NewWord. The original document is unaffected and can be revised as usual, then run through ToColumn again before the printing of each draft.

ToColumn preserves microjustification in each column independent of adjacent columns by utilizing WordStar and NewWord's overprinting facility. A little-known property of overprinting is that overprinted lines are microjustified independently. So, instead of simply appending the first line of column two onto the first line of column one, ToColumn separates them with a carriage return and enough tabs and spaces so that column two prints to the right of column one. WordStar and NewWord then print line one of column one microjustified properly, then overprint it with line one of column two, also microjustified properly.

Even if you don't care about preserving microjustification, ToColumn should still prove to be useful. To begin with, it's easy to use. By default ToColumn is installed to generate a two-column document with 30-character column widths and 5-character spacing between columns. If this is acceptable, all you have to do is reformat your document to 30-character lines and run ToColumn as in the following example with a document named TEST.DOC:

```
TC TEST.DOC TEST.TWO
```

The resulting multi-column output file, TEST.TWO, can then be printed by WordStar or NewWord without any further changes. You can also preview the output file by opening it as a document. Don't let the appearance of the document on-screen disturb you, though. The lines will be staggered because of the way WordStar and NewWord display overprinted lines on-screen, as follows:

```
Col1, Line1...
Col2, Line1...
Col1, Line2...
Col2, Line2...
```

It's even possible to make minor editing changes to the output document if necessary, although this is not recommended. To keep from confusing yourself, not to mention WordStar and NewWord, make your editing changes to the original document and then run it through ToColumn again to generate the output file which will actually be printed.

New Dot Commands

If you want a different column width, use the .RM (right margin) or .RR (ruler) dot commands. These dot commands will be new to WordStar users, but they've long been a part of NewWord. ToColumn looks for these dot commands to detect a different column width. Reformatting the document to the new column width after changing the right-margin with ^OR isn't enough. You must also include one of these dot commands at the top of your document to let ToColumn know what the column width should be. You can also run the installation program, TCINSTAL, to change the default column width.

To change the number of spaces between columns, I have introduced a new dot command: .CM (column margin). Use .CM8 at the top of your document to put 8 spaces between columns, for example. The default can also be changed with TCINSTAL.

Another new dot command is .NC (number of columns). To print in three columns, use .NC3 at the top of your document, or you can change the default value to 3 using TCINSTAL.

You can use .NC1 to start in one-column mode, for example to span a multi-line title across both columns, then switch to two-column mode with .NC2. Note that it's also possible to achieve the same affect without starting in one-column mode using NewWord's multi-line headers if your title is no more than three lines long.

One thing to remember about switching from one-column to multi-column mode is that the on-screen page-breaks in the original document will no longer correspond to the page-breaks in the printed document. As long as you stick to two-column printing for the entire document, the correspondence is simple: in two-column mode, pages 1 and 2 of the original document make up page 1 in the printed document, pages 3 and 4 make up printed page 2, and so on. This two-to-one correspondence is disrupted when you start in one-column mode. The output file will print fine, but it might be a little confusing trying to determine where a line in the original document will actually print on the page.

Two-Column Restrictions

You cannot switch back to one-column or switch from two-column to three-column on the same page. However, you can change the number of columns, column width, and margin between columns after a page break

command (.PA). You can also change the line height (.LH) and character width (.CW) after a page break. ToColumn warns you if you try to change these settings in the middle of a page.

With one exception, there are no restrictions on the use of print controls with ToColumn since it turns off any toggles that are still on at the end of a line and turns them on again at the beginning of the next line. The standard print controls ^B, ^D, ^S, ^T, ^V, ^X, and ^Y are all supported, plus additional toggles can be installed in case you're using any of the custom print controls as toggles. You may also wish to install ^A and ^N this way if you use them to toggle between alternate and normal pitch several times in the same section of text.

The exceptional print control mentioned in the previous paragraph is ^L. WordStar and NewWord do not appear to treat ^L the same, so ToColumn strips any ^L control characters from the document just to be safe. If you want to force a page break, use the .PA dot command. ToColumn will then know exactly what is wanted.

Column Breaks

The standard .PA (page break) dot command has been extended. Entering .PA C causes a column break or, if the current text falls in the rightmost column in the output document, this dot command will cause a page break. This command can be useful when you want each section of a document to begin at the top of a new column, but not necessarily at the top of a new page as would always be the case if you used .PA by itself.

The standard .CP (conditional page break) dot command has also been extended. Entering .CPnin multi-column mode causes a column break if there are not at least n lines left in the column in the print file. This command can be used to make sure a table isn't broken across columns as well as pages. If not enough lines, this command will start a new column or, if already in the rightmost column, a new page.

Side-by-Side Paragraphs

Another extension to .PA allows the use of side-by-side sections. Place .PA S between paragraphs or sections that you want printed side-by-side. This would be useful if you're preparing a document with a column in one language, for example French, and its translation, say English, in the opposite column. You would type the text as follows, alternating between French and English paragraphs:

```
French paragraph 1
.PA S
English paragraph 1
.PA S
French paragraph 2
.PA S
English paragraph 2
.PA S
```

This would print as follows:

French paragraph 1 English paragraph 1
French paragraph 2 English paragraph 2

There are a couple of restrictions on the use of this command. First, make certain you have the same number of lines in each section. If necessary, "pad" out the shorter paragraph with blank lines. For example, since French is usually more verbose than English, you would typically add one or more blank lines to the end of each English paragraph.

Determining the number of blank lines to add is simplified for you by the on-screen page-break caused by each .PA S. Simply move the cursor to the last line in the longer of the two paragraphs and look at the status line at the top of the screen. This will be the number of lines you'll need to have in the shorter paragraph's section as well. Now move the cursor to the end of the shorter paragraph and hit the RETURN key until it has that many lines too.

A second restriction is on the length of the side-by-side sections. The number of lines between two .PA S commands must be less than the number of lines that will fit on a page.

Highlighters *Beware!*

Another "trap" has appeared with WordStar, a consequence of one of the two traps discussed in the MOR Dec.'86/ Jan.'87 article "Two Column Printing."

The article recommended that you format the document to its single-column width with Hyphen-help on. It also stated that you must turn off any underlining or boldfacing at a line's end and turn it on again at the next line start for it to continue. This avoids highlighting unrelated text in the other column.

The *new* trap, found during production of a newsletter, involves wrapping as well. If an underlined phrase that wraps around from one line to the next contains a word that is broken by Hyphen-help, the inserted hyphen sees the underline code and thinks it is no longer at the end fo the line. It won't print.

The primary solution is to avoid excessive underlining or boldfacing. When highlighting is necessary and must carry over from one line to the next, avoid hyphens. You may even want to format the line manually to make the margins come out right without breaking words.

If you happen to be one of those people who love to employ polysyllabic terminology, you're out of luck. You'll have to give up many of those important hyphens, or shortening your words.

— By Wallace B. Riley

Also, don't mix .PA S with .PA C. This will yield unexpected results, to say the least. Note that side-by-side printing is really not the same as two-column printing at all.

Use the .CPn command to prevent side-by-side paragraphs, typically tables, from breaking across pages. Simply place .CPn before the first (leftmost) of the side-by-side tables to be preserved, where n is the number of lines in the table.

ToColumn's method of producing side-by-side paragraphs is similar to the way in which you do this with Microsoft Word, in that you format alternating paragraphs which are to be printed side-by-side. In fact, if you've ever used Word, you will be right at home with ToColumn. Like Word, you will still compose your text in one column on the screen, and you won't necessarily know on what page a piece of text will print until you've run the document through ToColumn (analogous to Word's Repaginate command) and previewed the output file or printed it.

Using ToColumn with NewPrint

The latest version (0.25) of my NewPrint program now fully supports the overprinting necessary to print the output files generated by ToColumn. NewPrint was written to provide printer support for printers and terminals with extended or alternate character sets, so now you can even do two-column printing using alternate characters. However, be sure to install ToColumn to recognize any custom print controls as toggles if you're using them as NewPrint's alternate character set toggles.

Summary of New Dot Commands

Here's a quick review of the new and improved dot commands provided by ToColumn.

.NC Number of columns
.CM Column margin (margin between columns)
.RM Right margin (used to set column width)
.RR Ruler (used to set column width)
.PA C Column break, or page break if already in rightmost column
.CP n Conditional column break, or conditional page break if already in rightmost column
.PA S Column switch for side-by-side paragraphs
.CP n Conditional page break for side-by-side paragraphs

The Complete Package

I've included the following files as part of the ToColumn package (FLOB JUN87 #6, MOR Product #4306):

READTHIS.TC - Brief introduction to ToColumn
TC.COM - CP/M version of the ToColumn program
TCINSTAL.COM - Installation program for TC.COM
TCTEST1.DOC - Two-column printing test document
TCTEST2.DOC - Side-by-side printing test document

I've also included the latest version of the complete NewPrint package, including my original BAMDUA article and NewWord patches for displaying a terminal's alternate character set on-screen while editing.

Requirements and Installation

TC.COM and TCINSTAL.COM require 44K TPA (transient program area). They do not have to be installed for your terminal or printer. However, if you've patched or reinstalled WordStar or NewWord and changed the default page length (66), top (3) or bottom (8) margin, or standard line height (8/48"), be sure to install TC.COM with the same values so that it can correctly determine where each page should break whenever default values are used.

ToColumn determines page breaks the same way NewWord does. This is not always the same as WordStar. If you are having trouble with WordStar, check the interaction between your line height and margin dot commands. You may wish to use NewPrint for two-column printing instead of WordStar since NewPrint is compatible with ToColumn and NewWord's method of determining page breaks.

If you are using WordStar with a dot-matrix printer, be sure to install ToColumn to put hard carriage returns at the end of each line that will be overprinted. For some reason, WordStar gets confused if a line ends only in a soft carriage return. Normally ToColumn uses the carriage return as it appears in the input document without zeroing the parity bit to ensure that microjustification will be correct. Do not change the default setting unless you are using WordStar with a dot-matrix printer since this is not a problem with WordStar and daisy-wheel printers, NewWord, or NewPrint. The symptoms are obvious: WordStar will simply pause after printing the first line of the first column. If this happens, run TCINSTAL to force ToColumn to use hard carriage returns. Or you may simply use NewPrint to do all of your two-column printing.

Note that TC.COM can be run without leaving WordStar or NewWord. Select the R (run a program) option from the main menu and enter the command that you would normally enter at the CP/M command line. When ToColumn exits, control will return to WordStar or NewWord, where you can then select P to print the output file generated by ToColumn.

Conclusion

Perhaps I've overlooked something in the development of ToColumn or omitted a feature which would be useful in your word processing. Let me hear what you'd like to see in future versions of ToColumn or similar word-processing aids. ■

Morrow User Groups —

Where are They, and What are They Doing?

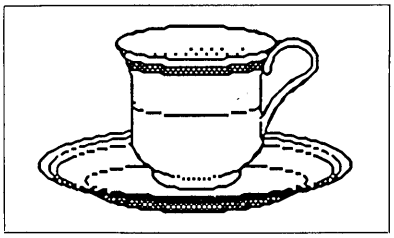
By LeMel Hebert-Williams

The State Of The MUGS Address

"... I believe that the times require imagination, courage, and perseverence ..." John F. Kennedy

HOW true for Morrow users everywhere! Just what is going on out there? The Morrow community has been through quite a bit in the last year, and it is reflected in the state of Morrow users' groups across the country. MUGs are composed of a wide spectrum of people. Some are really into the computer, and others are pure applications folks. Some know what they're doing, and others just do what they know. MUGs meet the needs of all these people for technical and social fun as well as utility.

In an effort to see just what *is* going on out there, we contacted each Morrow users' group we had record of. It was a strange affair, with disconnected numbers, no-longer-at-this-address notes, and sad news of recent demises. Also there were many of you who enthusiastically related the continued interest of local users. For the most part membership is on the decline, which was to be expected after the demise of



Morrow Designs. Lack of dealer support and competition from the production of other capable (blue) computers have lured many progressive computer fans away. What is keeping the average Morrow owner firmly attached to his/her computer?

Generally, Morrow users are enjoying the wave of the success of the ZCPR3 system offered by Echelon. This replacement of CP/M is a definite incentive for a person to stick with the Morrow he/she already has. It provides MD3 owners with excellent utilities and definable user areas. These, among other advantageous abilities, make Z-system owners all the more satisfied with their computers.

The story of trailing-off membership is familiar among all groups. In many instances, it is a case of people learning what they need to know, about NewWord or Personal Pearl for example, and then leaving the group needing nothing further. True computer people would rather switch to other systems. This leaves a small core of devoted Morrow users who continue to support their user groups. Many MUGs have had to scale down in immediate ways. Close to the home of MOR, BAMDUA (Bay Area Micro Decision Users' Association) has had to cut back on operations by reducing the frequency of the newsletter and (among other things) finding a new meeting place. As people drop from the active list, funds just aren't available for keeping things going at the same pace.

Hardware and software support can be hard to come by for Morrow users' groups these days, to say the least. Most groups appear to have little or no hardware support, although some are fortunate enough to have in their midst a boffin (British slang for techno-whiz) or two who actually "know the machines." In this way minor problems can be taken care of within the group. Major repairs are often shipped to other states if it seems worth the trouble. (This month we have included a listing of repair centers we know of that profess to service Morrow computers, terminals, and the like.)

MUG librarians dredge the airwaves for software to compile onto disks for their members. Sometimes a slight fee is paid for "borrowing" these disks to copy them, or the disks are reproduced and sold as units. Most groups will be happy to share what they've found and appreciate hearing about the discover-

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LeMel Hebert-Williams is a junior at the University of California at Berkeley, majoring in computer science and psychology. LeMel has been an MOR staff member since Fall, 1986.

ies of others in the public domain and elsewhere.

How do MUG members feel about being absorbed into other CP/M groups? Who knows? The fact is that most MUGers have resisted this notion, making it akin to "selling out." The general concensus is that a larger CP/M group (in which Morrow owners would constitute a minority) would not cater to their needs. The modesty of owning an orphan computer is certainly trying enough at times, and the one way to offset this is having a users' group all to yourself.

It will be of interest to know that there are also MUGS who actually have, or at least attempted, to join with larger groups. Michael Kelly, President of the Morrow Users' Group of Washington D.C., expressed such a merger as a natural next step with declining membership, although there is the usual resistance. Curt Finney of the Diablo Valley Micro Decision Users' Group explained that they tried to merge with a local Osborne users' group, but failed to generate interest on behalf of the Osborne group.

Some groups want to (dare I say it?) link hands with other CP/M users, and are willing to be KAY'd or FOG'd. Before we condemn this adulterous generation, let's examine some pros and cons.

For Keeping The Faith

1) No need to waste time with someone else's interests or problems.

2) 100% of the newsletter and other activities pertain to you.

3) Significant cut in search time when you are looking for someone to help you out.

4) Your library and librarian will remain Morrow-specific, which can make a big difference, believe me.

5) You can always change your mind later.

6) MOR cares about you.

For Jumping In The Sauna

1) A larger group means more people, more ideas, more knowledge. If your group is one of those with as few as eight or nine steady members attending meetings, etc., this could be an attractive factor.

2) A larger organization may be able to tap resources (group purchases, etc.) that a smaller group could not.

3) You may learn something about the potential compatibility of machines.

4) This group may be around longer than your own, so get your feet in now.

5) MOR still cares about you.

Evolution

Alternatively, some groups have evolved within themselves. The Fourth Corner KUG/MUG in Bellingham, Washington, is now composed of about 60 percent PC users. In fact, the first person I spoke to was a dedicated PC-DOS man! The group has continued in this way for some time, having monthly meetings and a newsletter catering to this hybrid interest.

There seems to be a non-interest in electing officers, or going through other niceties involved in keeping things in order. What sociological conclusions can be drawn from this, I am unsure. Some are recognized as "those who are actually doing the work" and others are just "those who reap." Since there usually aren't elections among groups, see what you can do to help out the person in charge. Let's keep the ball rolling.

As the CP/M world shrinks, it becomes increasingly imperative that those of us out there keep in touch in one way or another. That's what this month's issue of MOR is all about. How do we stay afloat in this sea of change? It is evident that the Morrow computer cannot float (throw-it-in-the-tub-and-see) on its own, but it takes people dedicated enough to its survival to support users' groups, produce software, run a bulletin board, or produce a newsletter (or magazine).

Why even be bothered with a users' group if you're doing just fine on your own? The MUG of Washington D.C. newsletter puts it nicely: "MUGW members receive a monthly newsletter, discounts on public domain software, hardware and supplies, and useful advice at monthly meetings." In addition there is the esprit de corps of fellow Morrites, knowledge of those who may be more experienced, and a good time for all involved.

EVERYONE benefits from the existence of a MUG, but even more so when there is active participation. How? By being part of a group, you make you presence known to the computer community. Many a Morrow owner has benefitted from the notice that a local repair shop took because of an active users' group.

Indeed, solidarity is a buzzword of sorts, but if you own an orphan computer and expect to continue to be happy with it, it would be worth your while check into the Morrow users' group in your area. We have included in this month's issue an updated list of groups across the nation. If your group or a group that you know of was omitted from the listing, please let us know.

We are happy to be a part of the "flotation device" that Morrow owners cling to. Until then, happy computing!

Boston Morrow Users Group
45 North Beacon Street
Allston, MA 02134
Phone: (617) 254-3028
Contact: Alfred Butler

MUGW
Morrow Users Group of Washington
1006 Pennsylvania Avenue S. E.
Washington, DC 20003
Phone: (202) 547-7000
Contact: Chester Katz

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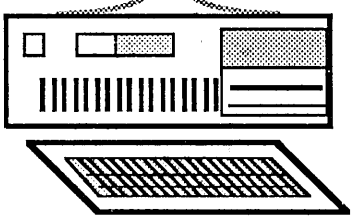

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(301) 944-4622
Contact: Tim Evans

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Greensboro/Lynchburg Morrow Users Group
P. O. Box 18724
Greensboro, NC 27419
Phone: (919) 272-8399
Contact: Kenn Melton

MOR-Atlanta
5461 East Wind Drive
Lilburn, GA 30247
Phone: (404) 381-1384
Contact: David McDonald

MUG Detroit
Morrow Users Group of Detroit
13825 Haverhill Court
Southgate, MI 48195
Phone: (313) 283-3016
Contact: Thomas C. Musolf

MAMUG
Milwaukee Area Morrow Users Group
1001 Keats Circle
Oconomowoc, WI 53066
Phone: (414) 567-5107
Contact: Helen Gust

WAMUG
Wichita Area Morrow Users Group
P. O. Box 47481
Wichita, KS 67210
Phone (316) 788-4102

DMUG Denver Morrow Users Group
10070 East Ohio Avenue
Denver, CO 80231
Phone: (303) 344-0499
Contact: Jon Plachy

AZMUG
Arizona Morrow Users Group
1041 East 6th Street
Tucson, AZ 85719
Phone: (602) 622-0170
(602) 293-5557
Contact: Phil Miles

Albuquerque Morrow Users Group
P. O. Box 11974 Albuquerque, NM 87192
Phone: (505) 299-7578
Contact: Steve Chaba

West Los Angeles MUG
1833 Franklin Canyon Drive
Beverly Hills, CA 90210
Phone: (213) 276-9096
Contact: Dr. Bernice Ennis

LAMUG
Los Angeles Morrow Users Group
12613 Killion Street
North Hollywood, CA 91607
Phone (818) 347-7283
Contact: Jack Byers

MDBUG
Micro Decision Bakersfield Users Group
P. O. Box 2594
Bakersfield, CA 93303
Phone: (805) 398-1885
Contact: Joe O'Bannon

SMUG
Stanford Morrow Users Group
221 Valencia Drive
Los Altos, CA 94022
Phone: (408) 243-1455
Contact Ross E. Voyles

DVMUG
Diablo Valley Micro Decision Users Group
31 Panoramic Way
Walnut Creek, CA 94595
Phone: (415) 935-9800
Contact: Curt Finney

BAMDUA
Bay Area Micro Decision Users Association
P. O. Box 5152
Berkeley, CA 94705
Phone: (415) 644-2805

PETMUG
Petaluma Morrow Users Group
293 Circulo Puebla
Rohnert Park, CA 94928
Phone: (707) 585-2980
Contact: Frank Nance

SCMDUG
Santa Cruz Micro Decision Users Group
376 Lucinda
Scotts Valley, CA 95066
Phone: (408) 438-0662
Contact: Marianne Russell

CP/MORROW Computer Group
7100 Witchinghour Ct.
Citrus Heights, CA 95621
Phone: (916) 725-0873
Contact: Bill Simpson

Fourth Corner KUG/MUG
P. O. Box 3028
Bellingham, WA 98227
Phone: (206) 624-2646 (day)
(206) 838-2521 (eve)
Contact: Morgan Freeberg

Today's To-Morrow Computer Club
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Burlington, Ontario L7P 3A7
Canada
Phone: (416) 632-3549
Coontact: H. Penman Smith

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Chicago First Osborne Group
Box 1678
Chicago, IL 60690
Contact: Benjamin Cohen

Kaypro Users Group
300 East Harmony Rd. #172
Ft. Collins, CO 80525
Phone: (303) 223-9017
Contact: James Sinning

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MOR Products

Original ***User's Manuals*** published by Morrow.

Prod #	*Description*	*Price*
601	Correct-It User's Manual	8.00
602	CP/M 2.2 User's Guide (for MD2 & MD3)	12.00
603	CP/M Plus Guides (for hard disk MDs; 5 books)	35.00
604	MBASIC User's Guide	12.00
605	MD Companion Guide (for everyone who isn't compatible with CP/M)	12.00
606	MD User's Guide (for MD2 & MD3)	12.00
607	MD Hard Disk User's Guide	12.00
608	Morrow Software Sourcebook (1983 edition)	8.00
609	NewWord User's Guide	12.00
610	Pilot User's Guide	12.00
611	SmartKey User's Guide	8.00
612	SuperCalc User's Guide	12.00

Service Manuals to help repair or enhance your machine. (Even if you don't do the repair yourself, your repairman probably will need them.)

Prod #	*Description*	*Price*
700	Complete manual set (701-710)	80.00
701	Micro Decision Service Guide w/ schematics for Rev. 1.1 & 2.0 (for MD2 & MD3)	25.00
702	Diagnostic II User's Manual (disk sold separately)	25.00
703	Hard Disk MD Service Guide w/ schematics	25.00
704	SA 200 Shugart Mini Floppy Drive Preliminary OEM Manual (for SS drives)	15.00
705	SA 455/465 Shugart Mini Floppy Drive Service Guide w/ schematics (for DS drives)	15.00
706	MDT20 Terminal Reference Guide	10.00
707	MDT20 Service Manual	12.00
708	MDT50 Video Terminal Service Manual	10.00
709	MDT60 Video Terminal Service Manual w/ MT70 Video Terminal Supplement	15.00
710	David Block's original MD Q&A book	6.00

ZCPR3 is a Morrow-bootable CP/M 2.2 replacement by Echelon for the MD3. Complete with two disks and manual, the ZCPR3 kit provides an operating system superior to CP/M 3.0. This kit currently only available for ROM Rev. 3.1. For more information on any of the **Z Supplement** disks (Prod. 803, 806 & 807) send a SASE to MOR, attn: ZCPR3 Dir.

Prod #	*Description*	*Price*
801	ZCPR3–including: Z-System, 85 utilities, help disk and *The Z-System User's Guide.*	59.50
802	Diagnostic II disk	45.00
803	ZCPR3 Utilities source. Five disks with the source code to some of the latest Z-System utilities.	35.00
804	ZCPR3: The Manual	20.00
805	Out-Think–Outline processor	45.00
806	Z-System source code. Four disks with source code to some of the system segments and BIOS.	
807	ZRDOS. Assembled ZRDOS without ZCPR3 plus HLP files.	40.00

ROM Upgrade Kits contain instructions, ROM chips and software—everything you need to bring your machine up to date. (Some software that won't run on older machines *will run* with an upgrade.)

Prod #	*Description*	*Price*
901	ROM Upgrade Kit for MD3	35.00
902	ROM Upgrade Kit for MD Hard Disks	45.00

Floppies of the Bimonth

With every issue of ***MOR,*** we compile floppies that contain public domain programs, short articles and other interesting tidbits. Each **Floppy of the Bimonth (FLOB)** costs $8.00. Listed here are the **FLOBs** for this issue. A list of all **FLOBs** to date is available upon request.

A Note on Using FLOBs

Some of the files on **FLOBs** have been compacted to allow us to put more on a **FLOB**. When you receive your **FLOB**, you will need to return these compacted files to their original form.

Which Files Have Been Compacted?

If a file name ends with "LBR", it is a library. A library is a file that contains a number of related files (e.g., one file might be a program, another file might be the documentation for the program). To use these files you must extract them from the library with a library-management program like NULU, which is available on **FLOB** #3301.

If a file name has a "'Q" in the middle of its three-letter extension (e.g. ,WORDSTAR.DQC), the file has been squeezed. Many programs will unsqueeze files, NSweep is a popular one.

If a file name has a "Z" in the middle of its three-letter extension (e.g., WORDSTAR.DZC), the file has been crunched. CRUNCH and UNCR are available on **FLOB** #3605.

For more information on using **FLOBs**, see ***MOR*** Vol. 3, #3, p. 55.

Prod.#4301 — FLOB/JUN87 Disk #1:

CRUNCH23.LBR	Update to Crunch Utility
SD119.LBR	Latest version of SuperDirectory

Prod.#4302 — FLOB/JUN87 Disk #2:

DOS+25.LBR	CP/M+-like CCP replacement for CP/M 2.2
FU-12.LBR	WordStar-like screen-oriented binary file editor, including binary/hex/ASCII calculator window. DDT and then some
LIFE3D.LBR	The Game of Life in three dimensions

Prod.#4303 — FLOB/JUN87 Disk #3:

LT18.LBR	Types, extracts, unsqueezes, uncrunches files inside libraries
LUX100.LBR	Latest version of library manipulation utility
MISSILE2.LBR	Video-oriented game
RESUME.LBR	Set of files to help write a job resume
TOON12.LBR	Dumps screen output to disk—needs extensive rewriting of BIOS code to work on Morrows

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Prod.#4304 — FLOB/JUN87 Disk #4:

B29V304.LBR	Combines features of NSweep and NULU–do not use to extract library files–doesn't always work properly on Morrow.
BIT7.LBR	Clears ASCII bits set in text by NewWord/WordStar. Makes text transferrable to other word processing systems.
CERTIFY.LBR	Combination of ZAP/DU and FINDBAD/BD; allows testing and selective examination of disks. CP/M 2.2 only
COREWARS.LBR	Classic computer memory game
FOGINDEX.LBR	Identifies "fog index" of writing; use to check your writing style.
FORM7.LBR	Text formatter for assembly language code; insures correct column format, label format for CP/M assemblers
ROYALOAK.DZR	Crunched, complete directory of one of the largest on-line CP/M PD software collections in the U.S.

Prod.#4305 — FLOB/JUN87 Disk #5:

UNARC16.ARK	Introduction to new file-archiving techniques (used in MS-DOS, creeping over to CP/M)
STARSHIP.ARK	Hammurabi-type game in CP/M .ARK archive file for UNARC demo purposes.

Prod.#4306— FLOB/JUN87 Disk #6:

TOCOL.LBR	See Phil Hess article; software to complement the article. All files are crunched and in library.
LT.COM	Library file typing, extracting utility (use this or NULU to extract files)
UNCR.COM	Uncrunching utility (use this to uncrunch files if you extracted them with NULU)

Back Issues

Vol. 1, #1, APR84 (Prod #101)

Technical and Foreign Language Text with WordStar☆ NewWord vs. WordStar ☆ Meet the Disk Drives in Your Morrow☆ Adding Disk Drives to Your Morrow ☆ Quieting Down Your Morrow MD3 ☆ Inexpensive PASCAL

Vol. 1, #2, JUN84 (Prod #102)

Concurrent Editing and Printing with WordStar ☆ Customizing NewWord☆Troubleshooting Your Micro Decision ☆ Diskettes Deteriorate ☆About Serial Communications ☆ Installing WordStar for Dot Matrix Printers

Vol. 1, #3, AUG84 (Prod #103)

Graphics Package for the Morrow ☆Freindly Telecommunications ☆A Very Simple Modem Program ☆Proportional Spacing with WordStar ☆Using BASIC to Control Your Printer ☆ Patching WordStar for an Epson Printer ☆Installing WordStar 3.0 for the MP100

Vol. 1, #4, OCT84 (Prod #104)

About Surge and Spike Protectors: I Thought It Would Never Happen to Me☆Public Domain Software Made Easy☆Programming Your Function Keys with NewWord ☆ More Printing and Editing Concurrently with WordStar

Vol. 1, #5, DEC84 (Prod #105)

Speeding Up Your Computer ☆WordStar Emergency Tricks☆Customizing WordStar's Terminal Defaults ☆ ZCPR3 Makes CP/M 2.2 Shine ☆Spool-Away with Printer Buffers ☆Notes from a Smartkey User

Vol. 2, #1, FEB85 (Prod #201)

Trouble-Shooting Your Morrow☆ Micro Justification and Prop. Spacing in WordStar ☆Teaching with Pilot☆Toward a More Useful MD2 (1,876K disk space) ☆Getting Started with TURBO PASCAL

Vol. 2, #2, APR85 (Prod #202)

Morrow Drive Error Messages ☆Saving Time in SuperCalc with X (eXecute) ☆ The Morrow Toolbox ☆Automatic Formatting with PILOT ☆ Uniform, A File Transfer Utility☆SUBMIT to Less Work

Vol. 2, #3, JUN85 (Prod #203)

Modems: What's Alll the Fuss About?☆ Getting Started with Modem Programs☆ Morrow Printer Ribbons☆ Locked Out of LogiCalc?☆ Short Introduction to FIDONET ☆ Adding Z-Clock to MD3 ☆ The Smartest Modem of All (Visionary) ☆ The CTS MM300 Modem with MITE

Vol. 2, #4, AUG85 (Prod #204)

Upgrading NewWord: Why and How?☆ KAMAS, an Outline Processor ☆ EUREKA! A CP/M Disk Cataloguer ☆ NSWEEP: A Public Domain Jewel☆ New Tricks for WordStar☆ ShadowPrint (SPRINT), a Print Spooler

Vol. 2, #5, OCT85 (Prod #205)

Running a Small Business with a Morrow ☆ Reflections on dBase II, Comparing Gold to Pearl ☆ dBase II Hints for Morrow Users ☆ Accrual Bookkeeping on Quest, Vers. 1.2 ☆ An Overview of Personal Pearl☆ Eliminate Sort Disk Swap when Using Pearl

Vol. 2, #6, DEC85 (Prod #206)

The Co-Processor Board Confusion ☆ Converting Your Morrow Keyboard to Dvorak ☆ Geneaology with Personal Pearl ☆ Telecommunictions: National and International ☆ VersaLedger II ☆ Indexing with Correct-It☆ The Animal Game ☆ Handicapped Users and the Morrow☆ Conway's Game of Life

Vol. 3, #1, FEB86 (Prod #301)

Best of Public Domain Software☆ Debugging: Overcoming the Fear☆ Public Domain Games on the Morrow☆ A Note on the C Programming Language ☆ Of Copyrights and "Public Domain" ☆ Adventure Strategies ☆ Functional Comparisons of Database Software ☆Personal Pearl Hints and Kinks ☆ Doing Returns on a Computer☆ Reviews of TAXWORKS, 1040 Plus

Vol. 3, #2, APR86 (Prod #302)

The Basics of Computer Typesetting ☆ More on Tools for Writers ☆ Some Favorite Public Domain Writers Tools☆ Desktop Publishing with a Morrow ☆ Proportional Spaced Printing with CP/M ☆ Reviews of WordFinder, Index, Footnote, Bibliography, Grammatik, wsNote, Number, FTNOTE, Dataplotter, ElectraFind, PropStar, MagicSeries, PrintMaster

Vol. 3, #3, JUN86 (Prod #303)

Doubling the Speed of Your Terminal Port ☆ Your 4-Drive Morrow: Adding Two More Drives to Your MD3 ☆ Connecting a Portable to Your MD ☆ Exploring the ROM in Your Morrow ☆ Updating Your Morrow with the Latest ROM — How and Why ☆ About Printer Buffers and Speed ☆ A User's Guide to Understanding the FLOBs☆ How I Quieted My Disk Drives and Lived Happily Ever After

Vol. 3, #4, AUG86 (Prod #304)

Maintainence for Your Daisy-Wheel Printer☆ Where to Get Your System Fixed: A List of Repair Shops Servicing MDs☆ UnSqueaking Your Keys☆ The Man Who's Got the Parts☆ Keeping Your System Alive: Minor Crises and How Prevent Them☆ Reviews of OUT-THINK and Thoughtline

Vol. 3, #5, OCT86 (Prod #305)

The Wonderful World of ZCPR3 ☆ Writing Your Own Educational Software☆Selecting Educational Software ☆ The Only Software an Academic Needs ☆ Reviews of Language Tutor, three typing programs and Write-Hand-Man

Vol. 3, #6, DEC86 (Prod #306)

From Morrow to Mac ☆ Simplified Desktop Publishing ☆ A Homegrown Portable MD11 ☆ Tune in to the *MOR* PBBS ☆ The Z-System and Mini-Winnie Hard Disk☆ Writing with SmartKey

Vol. 4, #1, FEB87 (Prod #401)

C Notes ☆I'll Take Pascal ☆Simple Beauty of Turbo Pascal ☆Cheap Disks ☆ Toolworks C/80 ☆ Nevada Pilot ☆ Making Function Keys Work ☆Customized Mailing List ☆Building Your Own Real Time Clock ☆The BASIC Approach ☆ MIX-C Complier

Vol. 4, #2, APR87 (Prod #402)

The ON! Computer ☆The NEW WordStar ☆ Let's Talk Disk Quality ☆Surviving a Hard Disk Crash ☆ Watch Out For That Landmine (comp. game) ☆Review of Twist & Shout

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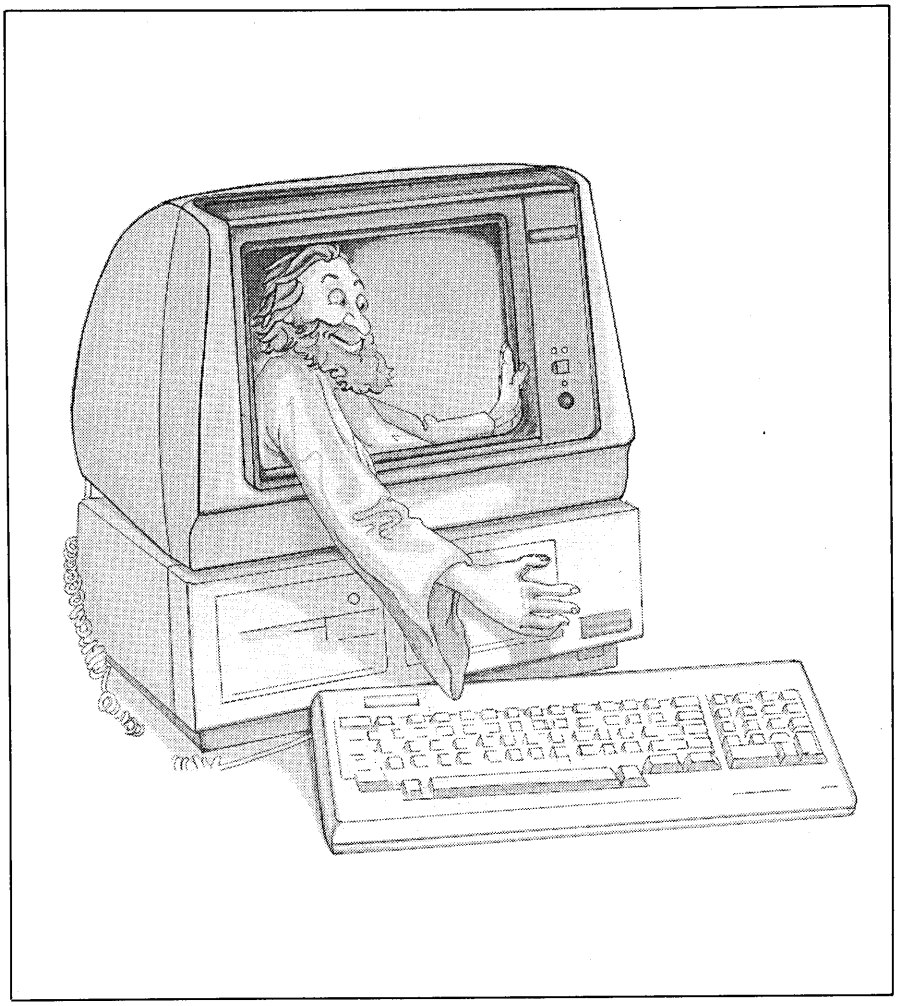
Let's Chat!

An Update of Morrow and CP/M Electronic Bulletin Board Systems

By Steve Wartofsky



IN order to stay in touch with other Morrow users at this point, you don't necessarily have to continue attending local user group meetings, even if they exist locally. You can still tap in to an entire network of information and help by logging on to Remote Bulletin Board Systems and Remote CP/M systems (sometimes they're one and the same).

If you have a modem, you can call other computers over the phone line, to exchange messages, download public domain software, and find out where to get help on repairs, updates and upgrades, etc.

What, in general, can you do with a modem? You can call a friend who also has a modem, "chat" with each other using your keyboards, or exchange files. You can call any of the commercially available information databases or Electronic Mail systems, like MCI or CompuServe, to send your mail in a fast and inexpensive way (note that the FCC is considering charging extra on certain systems, so the price of logging on to such commercial services may be more than you might want to pay in a few months). Or you can call any one of the many Computerized Bulletin Board Systems (CBBS's) that are available in the US today. There are right now about 25-30 major systems around the country which either have Morrow-specific software sections and information, or have large enough collections of "generic" CP/M stuff (i.e. it will work on Morrows, Kaypros, Osbornes,

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Steve Wartofsky coordinates the FLOB program for MOR and is the Sysop for BAMDUA.

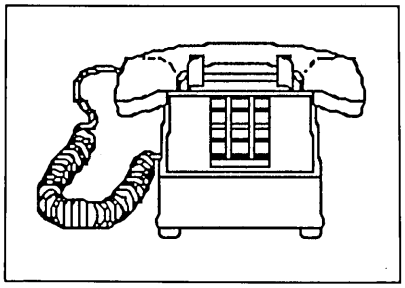
Portions of this article copyrighted by Jud Newell, Steve Sanders, and Mark Rippe, et al. Parts of this article originally appeared in the **Remote CP/M Systems List,** February 1987 revision.

Northstars, Ampros, Xeroxes, etc. without any special configuration being necessary for each machine) to make them of interest to Morrow users.

Access to CBBS's is generally free of charge, but you pay your own phone bill, of course. Many CBBS's double as Remote CP/M systems (RCPM's). You can operate an RCPM remotely from the privacy of your home computer as if you were operating your own, within certain limitations. CBBS and RCPM systems are operated by a SYSOP or Systems Operator, who decides who gets access to the system and to what extent, keeps an eye out to make sure the system is used properly, and keeps the system up to date. Get to know him or her.

An RCPM allows you to acquire Public Domain (free) software by means of a process called downloading, whereby you transfer text or program files from the RCPM computer to your computer to be stored on your disk. A note of warning: even though you can download a PC-DOS program successfully, do not expect to run it on your Morrow (on the other hand, if you're thinking of eventually purchasing an IBM-PC compatible, there's lots of Public Domain stuff for PC's out there that you could start collecting now on your Morrow, with the intent of using a program like Multiform or Uniform to copy it over to PC-compatible disks at some future date). However, most CP/M programs downloaded from and written for non-Morrow computers will run on your machine. Many RCPMs allow you to upload software or text files, meaning you can send files to the RCPM.

The following is a list of systems of interest to Morrow users. All of them use 8 data bits, 1 or 2 stop bits, and no parity for protocol. If you have IMP244 or MEX14, programs which will run a Hayes-compatible modem on your Morrow (we have both in the FLOB library for purchase), they will automatically configure the computer/modem combination to log on correctly to these systems. If you use a Morrow Modem and Reachout software, read the manual on how to configure this combination to the above protocol, if necessary. Most systems these days require registration (which may or may not involve a financial contribution), primarily because people fondly referred to as "crackers" will break into systems and damage them, sometimes knocking them completely off the air. Most systems also contain approximately 20 to 40 megabytes of free software on-line (one system, which isn't Morrow-specific, has 175 megs on-line!), so you'll have to spend some time picking and choosing what looks useful to you. Please be sure to read all the help and information a system automatically provides to you, to make most efficient use of it; while this may take some time your first few logons, it will tremendously speed up your logons afterward. You should concentrate on spending as little time each logon as necessary, both to limit the amount of your phone bill and to allow other users onto the system.



Morrow-Specific BBS's:

BAMDUA, Berkeley, CA—(415) 654-3882

MOR RBBS, Berkeley, CA—(415) 654-3798

SVS RBBS, Oakland, CA—(415) 261-4513

WALNUT CREEK RCPM/SBBS, Walnut Creek, CA—(415) 938-9470

CREIGHTON U. RBBS, Nebraska—(402) 280-3023

LYNCHBURG MUG, Lynchburg, VA—(804) 846-1880

ORANGEVALE RBBS, Fair Oaks, CA—(916) 988-2660

Other BBS's of interest to Morrow users:

[NORTHERN CALIFORNIA]

FOG RBBS-RCPM #1 — (415) 755-2030

First Osborne Group; (3B;47M); Box 3051, Daly City, CA 94015; FOG Network Headquarters. Registration required before CP/M access granted. Large CP/M (Kaypro, Osborne, Morrow, etc.) p/d library. (V:01/87)

FOG RBBS-RCPM #4 — (415) 591-6259 Roy Robinson; (3B;10M); Registration required before CP/M access granted. FOG CP/M p/d library (Kaypro, Lobo Max, Osborne, Morrow, Televideo, etc.) available on request to FOG members. (V:01/87)

FOG RBBS--RCPM #12 — (415) 851-7732 Troy Soult; (3B;40M); Registration required before CP/M access granted. FOG CP/M p/d library (Kaypro, Lobo Max, Osborne, Morrow, Televideo, etc.) available on request to FOG members. (V:01/87)

FOG RBBS-RCPM #18 — (707) 557-4403 Ron Forsythe; (3B;360K); Registration required before CP/M access granted. FOG CP/M p/d library (Kaypro, Lobo Max, Osborne, Morrow, Televideo, etc.) available on request to FOG members.(V:01/87)

FOG RBBS-RCPM #31 — (415) 692-1406 Jim Switz; M-F 6P-8A, wknd 24 hrs; (3B;720K); Registration is required before CP/M access granted. FOG CP/M p/d library(Kaypro, Lobo Max, Osborne, Morrow etc.) available on request to FOG members. (V:01/87)

Humor and Wisdom — (415) 937-2508 Dave Porter; (3B;1.5M); Hu-

mor, Jokes, poetry, insights, etc; Also supports software download, upload. (Walnut Creek) (V:01/87)

KAY*FOG RBBS-RCPM SYSTEM (FOG System #11) (415) 285-2687 Bond Shands; (3B;10M): (Box 11135, San Francisco, CA 94101); No fees, registration required; special interests, newcomers to BBS's and modeming, Kaypro, Osborne, Morrow, and general CP/M. (V:01/87)

Saratoga RCPM — (408) 354-5934 Chuck Metz & Irv Hoff; (3BC;85M); Running PBBS software; Interests in CP/M 2.x/3/86, PC & MS DOS; OPEN system (V:01/87)

SERVU — (408) 238-9621 Al Mehr; (3BC;27M); ZCPR2, CP/MUG, SIG/M, CP/M-86, PC/MS-DOS;(registration required for access to software exchange) now multi-user on Molecular 940/T (V:01/87)

The ZCPR3 BBS/Z-Node Central — (415) 489-9005 David McCord; (3B;11.5M); Z-MSG message system. The authoritative source of updated ZCPR3 utilities and Echelon news-letters. Preconfigured Z3 packages for Apple, Heath, Kaypro, Morrow, and other machines. Help with ZCPR3/ZRDOS questions.

Walnut Creek RCPM/SBBS — (415) 938-9470 Werner Gumpert; (3BC;11M); Software for CP/M-80, CP/M-86, CCPM, MS-DOS, Morrow, Z-100, IBM PC and Clones. Running on a Morrow MD11. New USR 2400 modem. (V:01/87)

ZeeMachine Z-NODE #35 — RBBS/PDSE— (408) 245-1420 Norman Beeler; Irv Hoff (3BC;20M); Full ZCPR3/ZRDOS support. CP/M and DOS programs; (V:01/87)

[SOUTHERN CALIFORNIA]

The CP/M Connection MBBS/RCPM — (213) 530-0670 Arun Baheti; 24 hrs/7 days!; (3BC;7M); Xerox 16/8, USR Courier Xerox systems, Modem, Printers, BBS News, Text, RCPM utils, ZCPR3, Languages, MBBS, Arpanet, CP/M utils, Misc CP/M files. NO registration required. System now supporting 2400 baud and 1k Packet transfers! No Hacking/Phreaking! (Torrance) (V:1/87)

The Downey Remote CP/M Exchange Center — (213) 806-2226 Mark Motley; (3BC;12M); Now running PBBS, ZCPR3, and Courier 2400. New MS-DOS section! No validation required. Interests in PBBS, PC-MS DOS, compilers and languages. 1k packets (V:1:87)

Thousand Oaks Technical RCPM (RIOS) S/1 — (805) 492-5472 Trevor Marshall; (3,36B;66M); Use CHAT to request noise resistant 300 baud modem; active BBS; ALL SIG/M, PC-Blue & Capitol-PC Users Group software. Most C-UG vols. (7900+files

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on-line.) (V:01/87) (Until floppies repaired, cannot accept uploads, send to S/2.)

Thousand Oaks Technical RCPM (RIOS) S/2 — (805) 493-1495 Trevor Marshall; (3B;65M); no BBS; unlimited upload time, download time 15 mins/day max., (increased 2 for 1 for uploads); (Networked to same 64MB hard disk as system 1.) (V:01/87)

Time-=<X>=-Change RBBS — (213) 329-3922 Dave Clifford;(3B;25M);Northstar Advantage System;CP/M utility and specialty software for all z-80 based systems;NO registration NO time limits;Access VIA GTE/TELENET. Special interest in N* Advantage/Horizon, Televideo Systems, Xerox, Timex Sinclair.(V:01/87)

Torrance RQP/M — (213) 320-9309 Mitchell Mlinar; (3B;20M); Home of QP/M, CP/M replacement (same size) which provides ZCPR facilities, date stamping & many extra. Xerox, Kaypro, BigBoard, Ampro; QP/M, KayPLUS, Plus2, Compilers; Direct support board for MICROCode Consulting customers. (Torrance) (V:01/87)

West Los Angeles RCPM — (213) 838-9229 Gary Inman; (3BC;40MB); Online application required for full access; technically oriented system supporting CP/M and CP/M+; Other types of computers are welcome to use the message system; Accessible by PC Pursuit.(V:01/87)

[GEORGIA]

FOG RBBS-RCPM #27 — (404) 354-0662 Bob Herrin; (3B;10M); Registration required before CP/M access granted. FOG CP/M p/d library (Kaypro, Lobo Max, Osborne, Morrow, Televideo, etc.) available on request to FOG members. (V:01/87)

[ILLINOIS]

FOG RBBS-RCPM #14 — (217) 344-4032 Jonathan Block; (3B;20M); Registration required before CP/M access granted. FOG CP/M p/d library (Kaypro, Lobo Max, Osborne, Morrow, Televideo, etc.) available on request to FOG members. (V:01/87)

[KENTUCKY]

FOG RBBS-RCPM #24 (Land of OSZ) — (502) 241-4109 Curt Edwards; (3;360K); (7pm-7am/M-F;24hrs/S-S); Registration required before CP/M access granted. FOG CP/M p/d library (Kaypro, Osborne, Morrow, Televideo) available on request to FOG members. (V:01/87)

[MASSACHUSETTS]

FOG RBBS-RCPM #29 — (617) 288-4667 John Kinsella; (3;550K); (M-F 5P-9A, wknd 24 hrs); Registration required before CP/M access granted. FOG CP/M p/d library (Kaypro, Lobo Max, Osborne, Morrow, etc) available on request to FOG members. (NA:01/87)

Newton Centre BigBoard — (617) 965-7259 Sage Microsystems East; (3B;2M); Logon Password "BIGBOARD". Runs on Ferguson Bigboard I. Technical board concentrating on CP/M 80 programming and software issues and on the ZCPR software system. Proprietary areas for the distribution and support of the Sage Microsystems Products. (V:1/87)

[NEBRASKA]

CP/M Connection — (402) 346-8079 Bob Moss; 10P-8A ONLY!!;(3B;1.8M); Morrow MD3 running ROS32; General messages and public domain file transfer; Omaha area CP/M User's Group library disks online, swapped regularly. (V:01/87)

National Biomedical Engineering BBS — (402) 280-3023 Kirk Benedict & Wayne Young; (3B;15M); Morrow MD3 running DRBBS software; Breighton University Pharmacy Department, many files of interest to doctors and pharmacists. Also has CP/M and MS-DOS files online. (Omaha) (V:01/87)

[OKLAHOMA]

FOG RBBS-RCPM #13 — (405) 848-5317 Whitney Boutin; (3B;10M); Registration required before CP/M access granted. FOG CP/M p/d library (Kaypro, Lobo Max, Osborne, Morrow) (V:01/87)

[OREGON]

ROSE CITY RCPM-MBBS — (503) 283-9677 Dan Dimick & Mike Sweeney; (3BC;10M); Kaypro 10 With MBBS; New CP/M users welcome; CP/M, dBase, Utilities and more. Micro Cornucopia Disks online. Support MORROW & KAYPRO (V:1/87)

[PENNSYLVANIA]

Ramblin' Wizard RCPM (FOG System #10) — (717) 657-8699 George Peace; (no ans if in use); (3BC;15M); Registration req'd before CP/M access granted; Osborne Executive running BYE+ and MET-AL software; specializing in Executive and CP/M plus software. (Harrisburg) (V:1/87)

[SOUTH CAROLINA]

Pee Dee Exchange - ROS — (803) 393-7399 Erwin Reyer; (3BC;40M) 24hrs/daily. Must complete request message for full access! Areas: CP/M, CP/M+, MS-DOS, MBasic, TPascal, DBase, Telecom, Tools, Word/Print, etc. Specific support: Epson QX-10/16 & PX-8, Morrow, Apple and CoCo systems. SIGOPS for latter two users. Member ROS-NET. (Florence, SC) (V:1/87) ■

The Word Plus — The Pluses and Minuses

Its Features and Performance Compared to Correct-It

By Ilbert Butler

WHEN I accepted the task of reviewing The Word Plus, as distributed by NewStar Software, publishers of NewWord, I prepared to compensate for two personal idiosyncracies:

A confirmed NewWord junkie, I expected whatever NewStar distributed to be superior. I am a natural speller, the kind who went to state spelling competitions as a kid and who uses a spell-checking program almost exclusively for proofreading, rather than having any need to check spelling. I have tried to consider the program both as a spell-checker and a proofreader.

For this publication, The Word Plus must be compared with the bundled "free" software program "Correct-it," which Morrow MD CP/M users received with their systems.

The Facts

The Word Plus is a better spell-checker than Correct-It, because it has a larger dictionary (40,000 words compared to 30,000), and it is faster and has more features. Still, it cannot substitute for a hard-copy dictionary (which it does not claim to be), since only hard-copy dictionaries have complete word division, secondary spellings, and long lists of prefixed and hyphenated words (not to mention definitions).

It has many features not in other spell-checkers, at least some of which will be valuable to most users. For those so addicted, it is invaluable for solving word puzzles. Its program FIND.COM, which can look up words using wildcards, is also a marvelous tool for writers, especially poets and lyricists, who can find rhyming words, but flawed by being accessible only from the system prompt, inaccessible while spell-checking.

The Word Plus gets rid of all the problems in Correct-It, but adds a few problems, which Correct-It solved. Most notably: the program contains no algorithm for recognition of regular plurals, which means it takes longer than it otherwise would, and is too slow as a proofreader, but still faster than Correct-It. The utility for looking up words in the dictionary while interactively checking is clever, but so limited that I consider it deficient.

Poets, songwriters and word puzzle addicts must buy The Word Plus, as should poor spellers and desk-top publishers. Everyone else should weigh the pros and cons in this review, and perhaps wait a few months to find out if FIND.COM becomes accessible from the interactive spell-checking portion of the program in a later version.

The Word Plus is a faster spelling checker because it solves many of the problems not solved by Correct-It and other spell-checkers. It ignores all soft hyphens, wherever they occur, and all hyphens at ends of lines, reassembling each hyphenated word as one. When a word contains a hard hyphen at midline, the hyphen is treated as a space and the word as two words. These rules only cause problems in two cases: When a word divided at the end of a line is always hyphenated at the point of division; and when one part of a hard-hyphenated word is not a complete word in the dictionary by itself.

"The Word Plus is a better spell-checker than Correct-It, because it has a larger dictionary (40,000 words compared to 30,000), and it is faster and has more features. Still, it cannot substitute for a hard-copy dictionary ... "

Ilbert Butler is an attorney in private practice in Berkeley, California and is an MD3 user and an active BAMDUA member.

However, these rules solve many more problems than they create.

The Word Plus also has algorithms (rules) to ignore: a single apostrophe and apostrophe-s (as in a possessive) at the end of a word, and numbers followed by letters, such as "1st." These could cause errors, but likewise solve many more problems than they create.

The Word Plus allows the user to choose whether or not to view the context of any "bad" word it does not recognize. In other words, whether to view the context is not an all-or-nothing choice at the beginning of a checking session, and not all the text has to scroll by. Instead, as each unrecognized word comes on screen, the user has a choice whether to view the context or not.

The Word Plus offers the option to ignore all dot commands in spell-checking, by telling it to ignore all lines beginning with a period. This corrects a serious deficiency in Correct-It: In that program, if the user spends the time to enter in an auxiliary dictionary all the dot commands and common file extensions (TXT, BAK, etc.), this increases the possibility of failure to find genuine spelling errors, and there will still be non-words in dot commands that come up for checking.

Deficiencies

The Word Plus has two minor and two major deficiencies, the first minor deficiency being that the otherwise excellent manual appears to have been indexed only by computer, without human backup. Relatively minor, but still a nuisance, is the fact that the user can't get into the main dictionary, which *is* possible in Correct-It. This means, for example, that law offices can't delete "judgement" from their main dictionaries, because they want to catch all misspellings of "judgment." It also means that long auxiliary dictionaries will impinge on disk space, and cannot be transferred into the main dictionary.

Unlike Correct-It, The Word Plus cannot recognize regular plurals. Correct-It not only has such an algorithm, but also allows the user to switch it on and off. Therefore, in The Word Plus many plurals that end in "s" or "es" come up as "bad" unrecognized words, and looking up a word only gets you the singular form. The fact that regular plurals come up unrecognized slows down proofreading enough to be a noticeable nuisance.

Paradoxically, although The Word Plus has not one but two lookup utilities, both of which have clever features not found in Correct-It and other spell-checkers, the best one is not accessible while interactively checking a text file. The lookup feature while checking is limited and deficient.

To explain this, there are two programs, LOOKUP.COM and FIND.COM. LOOKUP has a nice way

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Xerox 820-I,II	✓	✓	✓		
Micro Mint SB-180	✓	✓	✓		
Gemini Zorba	✓	✓	✓		
Osborne	✓	✓	✓		
Sanyo MBC-1150/ 1160/1200	✓	✓	✓		
AVL Eagle (with mods)	✓	✓	✓	(You may delete $90	
Alspa II	✓	✓	✓	for external systems	
Epson QX-10	✓	✓	✓	less P/S enclosure	
Morrow MD-2,3	✓	✓	✓	Add $6.00 for extra	
Z-80 S-100 Computers	✓	✓	✓	long cables)	

The key to the Mini-Winnie system is the INSTALL program, which links your drive and your computer, the way YOU want it. Extensive menu options allow selection of any ST-506 compatible drive, as 1 to 4 logical drives within CP/M at any drive letter. Diagnostic and formal capability provided to match the installation. Distributed in SOURCE form. Compatible with most other add-ons, including SWP CoPower, ZCPR3 and microsphere.

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of finding the most common misspellings. It looks for similar words with one more or one less letter, or one letter wrong, or in which two letters have been reversed. That's great! But it is problematical to have this be the only lookup utility available, while interactively checking. The user can't look up the general area of a dictionary, where the word would appear in alphabetical order, if it were there and can't look up any other word. To give an example how bad this is, if a verb forms its past tense by adding "-ed," and only the present tense is in the dictionary, an attempt to look up the past tense while checking will find nothing. Also, words beginning with the prefix "re-" meaning "again" cannot be looked up in their form without the prefix, while spell-checking. This is unacceptable.

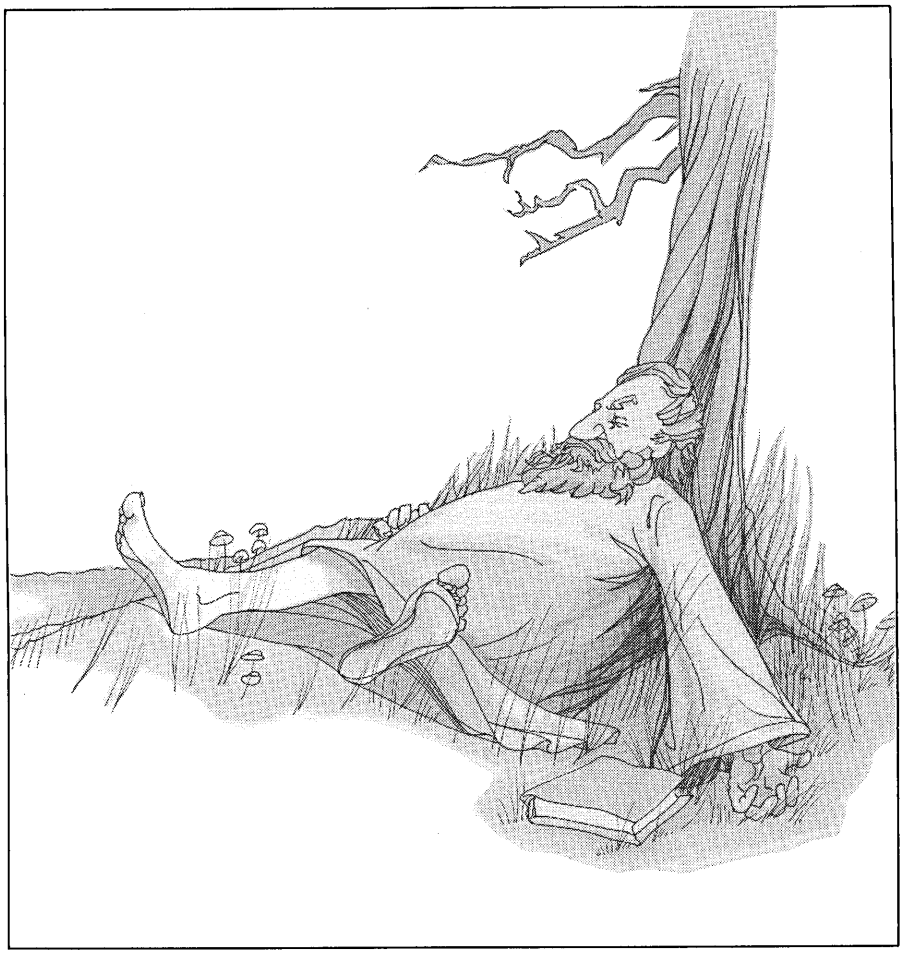
By far the better lookup utility, and one that could sell the program package to many people, is FIND.COM. This program can find character strings using wildcard designations: "?" used any number of times to indicate a single letter; and "*" used once to indicate any number of letters. FIND can also solve crossword puzzles and list rhyming words. A poet or lyricist can find all words in a 40,000 dictionary rhyming with "dimension," just by typing:

A>FIND *.ension<cr> [words displayed] followed by: A>FIND *.ention<cr> [words displayed]

But FIND.COM is accessible only from the A> prompt. This may be because its superior features consume too much memory to run at the same time as the interactive spell-checker. Also, for some reason it can't find any character string wherever it occurs in a word, something computers are particularly well suited for (i.e., it cannot: A>FIND *iou*<cr>).

Some Positive Features

I have no reservations in giving The Word Plus an unconditional "MUST BUY" recommendation, if FIND.COM were accessible from the interactive checking program and it could find any character string. There are other features of The Word Plus not found in Correct-It or in many other spell-checkers. I agree with the limitation that some of these additional features are not accessible during interactive checking, because doing so would over-burden disk space and memory and slow down proofreading.



These features include the ability to use two (or one or none) auxiliary dictionaries while spell-checking. This is perfect for creating special dictionaries for technical terminology, such as "computerese."

HYPHEN.COM is a utility for automatically hyphenating words. As well as running it to find out how to hyphenate a particular word, the user can also insert soft hyphens in all words of specified length in an entire text file. Since this program uses rules for hyphenation, which are not invariable, it allows the user to create an exception file. Unfortunately, it does not run while spell-checking.

MARKFIX.COM is a utility for general-purpose document marking and correction, which runs during interactive checking and from the system prompt. This permits complete rewriting of documents, both to correct repeated misspellings, and also to change words. This may be faster or more convenient, and will surely be more accurate, than using the quick-find-and-replace commands of a word processing program. It will be more accurate, because it recognizes words in three categories: all lower case letters, all capitals, and first letter capital-

ization — and replaces misspellings with the same form of letters. (Two misspelled words it could not correct were: "NeuWord" and "WardStar.")

Homonym Help This is not run while spell-checking and is accomplished by having MARKFIX mark all words in a text file that occur in a separate file, which lists common homonyms. To customize and speed the process, the user can delete from or add to that file.

ANAGRAM.COM is a tool for solving anagram and "Jumble" puzzles, in which the letters of words are rearranged, not run while spell-checking (e.g., LECUN = UNCLE, when unscrambled).

WC.COM is a word-counting utility more accurate than any program in the public domain, because it combines hyphenated words and counts them as one word. This is an aid to authors struggling to meet both time deadlines and maximum word limitations. Word counters in the public domain overcount words, because they count each part of hyphenated words as separate words.

WORDFREQ.COM produces a sorted list and counts how many times words appear in a file.

The Word Plus and Correct-It — The Great Race

I compared the performance of The Word Plus and Correct-It on a long (9-1/2 pages, 4,671 words) technical article, which I felt would be a good test of both speed and features. I made sure to use a dictionary and reference materials the same in both runs.

Speed: The Word Plus was the clear speed winner. Complete correction, marking of words that change length and reformatting the text where line length changed, took 20 minutes. Correct-It took just over 27 minutes. Most of the time difference was caused by Correct-It finding words divided at ends of lines. The Correct-It time would have been significantly longer, if I had not already included in my auxiliary dictionary all dot commands. The Word Plus recognized as misspellings some properly hyphenated combinations. However, this conveniently alerted me to my inconsistent use of a prefix with and without hyphenation. The Word Plus could have been three to five minutes faster if it had regular plural recognition.

Plurals: Time was wasted by The Word Plus calling up regular plurals not in the dictionary, e.g: apertures, backups and kilos. Correct-It did not contain "kilo" at all, and did not recognize "apertures" as a regular plural, which it should have. My file did not contain many plurals. Other text files I have corrected, which contain many plurals have been frustrating to correct, but still faster than Correct-It.

Ordinary and Technical Words: Both dictionaries are so parochially American that they failed to recognize the word "Mountie," and both also failed to contain some simple terms about machinery like "milled" and "gunsmith." Both also failed on rather ordinary proper names, "Jeff" and "Carlos." Neither contained the admittedly technical terms, which I would not necessarily expect them to contain: "bipod," "collimator," "polycarbonate." However, overall, the list of ordinary words not recognized was significantly longer with Correct-It than The Word Plus. Ordinary words, which only Correct-It failed to recognize were:

carburetor catalogued tryout
jamming innovative machining
slicing esthetic (aesthetic OK)

Only The Word Plus failed to recognize:

shoots fiberglass (fiberglas OK)

Abbreviations: Correct-It has definitely paid more attention to abbreviations in its dictionary. Abbreviations it has, which are absent from The Word Plus include:

mm Co Inc lb Mr Jr II

Both dictionaries failed to contain "ppd" and "UPS."

Combinations: Both dictionaries did poorly on combination words including many words using the prefixes "re-" and "un-." Words both missed include:

refinish unmilled ultralight reattach
undrilled overkill

Lookup While Checking: The Word Plus definitely fell short on this one. Neither dictionary contained the words:

spearheaded ascribing

However, looking up these words while checking in Correct-It found "spearhead" and "ascribe," but The Word Plus located nothing while spell-checking.

The Word Plus Overall

The Word Plus has real promise as *the* spelling checker to use. If you can do without a few minor improvements, it may already have achieved that status.

The product held up well through my rather rigorous testing, which impressed me. As a tool for most people needing proofing or spell-checking, it is a good choice.

Now that NewStar has been consumed by MicroPro International, The WordPlus will be bundled with NewWord for CP/M 80 and 86. (See note in ***Important Announcements*** *on page 43.) The WordPlus will not be available separately from MicroPro, but can be purchased directly for $150 from its manufacturer, Oasis Systems at P.O. Box 112489, San Diego, California, 92111, (619) 453-5711. It is compatible with a large number of word processors. If you have questions, call either Oasis or MicroPro — Ed.*

Mr. GoodByte: Ron Jacobs

Portrait of a Morrow Repair Whiz

By Serge Timacheff

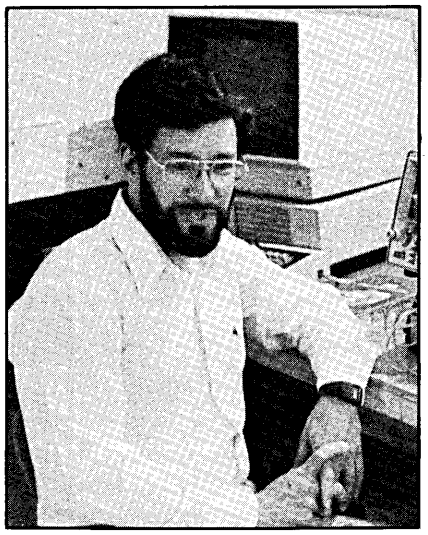
RON Jacobs began working on Morrow Computers after leaving Morrow in June, 1984. He had worked in production with the Decision 1 line and also in technical/customer support. Since that time, Jacobs has built up a steady business repairing, consulting, buying, refurbishing and selling used computers — more specifically, Morrow Computers.

Jacobs' three year term with the company gave him the technical knowledge and information he needed to specialize in Morrows virtually exclusively. "I think it's better to concentrate on one computer and know it completely than to generalize," Jacobs said. "That way, also, I don't have to spend time ordering parts."

His spotless workshop in Berkeley, California sports several Morrow computers smattered with a high-quality oscilloscope, tools, a high-speed printer, and a RAM hard disk that he made himself. He keeps a stock of parts so that he can repair everything down to the component level, if possible. Often you'll see a customer's computer or keyboard hooked up to another customer's terminal printer. In that way, Jacobs can test repaired equipment under "real-time" situations. He uses the equipment with his daily work to verify that it works.

Serge Timacheff is the Managing Editor of the Morrow Owners' Review and a free-lance writer.

Even though the business is a struggle, Jacobs likes the Morrow and averages about one new customer a day. He is constantly on the lookout



for people needing his service. "If Morrow sold it, I usually work on it. I don't work on too many printers; mostly Decision 1's, S-100's, Micro Decisions, and terminals. Morrow only sold a 300 baud modem, which if people call about, the first thing I do is recommend that they replace it with a 1200 to 2400 baud modem. I usually don't work on modems. I also work on software and I try to stock replacements for hard drives.

"As for non-Morrow equipment, Morrow didn't make the ADM terminals, which were manufactured by Liberty Electronics. Lear Siegler made the ADM-20's and Liberty made several others." Liberty is still in business, and Jacobs gets information from them occasionally. "I also work on the drives, which were not made by Morrow. They were purchased from other manufacturers, such as Shugart and Panasonic, and Seagate for Hard Disks." He keeps enough parts on hand that he can exchange boards or terminals with customers that can't live without their systems during repairs.

Morrow Life Expectancy

What does Jacobs view as computer longevity? "I keep my equipment running a lot longer than most people do. I drive a '67 Ford Falcon, I repair it when it needs it, I maintain it, and I have no problems. It's as reliable to me as anybody else's new car. People look under the hood and see all that empty space — no air conditioner, no power steering, and easy to work on. For me, I'll keep my Morrow running as long as I need to. For users, my experience — the same as with cars — is that they reach a level of frustration."

"They figure that the computer is old, something is wrong, and they don't know what. They decide not to fool with it and that they may as well replace it." At that time, peer pressure can take hold and the customer buys an IBM or Macintosh.

"Computers aren't like TV's. You can let your TV picture deteriorate, let

the color go bad, or endure a picture flip once in a while. You can watch it when it is still a little snowy. With a computer, however, you can't really do that. Maybe you can tolerate it failing once a day or so, but you really can't let it deteriorate too far before you want it fixed."

> ***"Maybe you can tolerate it (your computer) failing once a day or so, but you really can't let it detiorate too far before you want it fixed."***

That actually eases Jacobs' work. When he was much younger, he worked on old TV's. "I hated it, because people wanted them fixed no matter how old or terrible the set was."

Ron's Tip for *THOSE* Printers

The MP series of printers, manufactured by Silver Reed, have caused problems for people trying to have them repaired. Often Silver Reed is reluctant to repair the Morrow units and few repair shops are willing to accept a sick MP model printer. Jacobs admits to repairing Silver Reed printers as well as others, although he does not like to spend *too* much time with them.

"I have a tip for people who own Silver Reed printers. I've fixed printers of various types, and I have not found any electronic problems with them. What I *have* found is that they have gotten very dirty. They suffer from lack of maintenance — if you don't take care of them, you're going to find that your carriage won't go the way it's supposed to. The print head won't move."

In many ways, the printers are like firearms. Some can operate well even if they're dropped into mud, yet others will jam with the tiniest morsel of lint. "You need to clean and lubricate the printer once in a while, and you probably won't have the problem. People should just take care of them."

Diskette Quality and Drive Cleaners

The controversy over what kind of diskette to use and whether or not to clean disk drives still rages today in virtually every corner of the computer arena. While some disk users swear that they have only used cheap, single sided disks in double sided drives for years without fail, others don't wish to take the risk and say it's worth it to go the extra dollar or two and buy high quality. Jacobs seems to side with the latter.

"Use a high quality disk. I saw a disk the other day with *visible* grooves ground into it. I tried cleaning the (customer's) drives with a Q-Tip and alcohol, but I recommended that the owner check his disks for wear and occasionally back up disks and throw old ones away.

"I believe that you could get disks that could damage your heads. Without proper lubrication in the oxide, the disk isn't polished enough to float smoothly along the head and it becomes abraded or data is lost.

"It's hard to tell what a disk's quality is. I'm not a chemist and I can't analyze the chemical composition, and I don't have a micrometer to measure coating or disk thickness.

"As for disk drive cleaners, I have rarely or never seen a disk drive cleaning kit accomplish anything. I used to use them occasionally when I didn't know what was wrong with the computer, but it never helped."

"At this point, I suspect that disk drive cleaning kits may do more harm than good — they may abrade the heads, which are made of highly polished glass.

"Wait until you computer goes down. Then, if you want to, try cleaning your drives with a kit. When that doesn't work, take it and get it repaired. Don't use disk drive cleaning kits as a preventive measure."

Jacobs believes, however, that some forms of maintenance and prevention are important. "Computer covers are a good idea. I don't use them all the time, but I do use a keyboard cover always. I think there are many keyboards out there that would have lasted much longer if a cover had been used. Vacuuming helps. I usually vacuum each keyboard I work with to clean it up."

Morrow's Twilight Years

Even though Ron Jacobs says he can keep his computer alive as long as he needs to, the fact remains that Morrow Computers — even old, sick ones — will no longer exist one day. What will the Morrow repair specialist do then?

"I may get into terminals that were made for Morrows, such as the ones from Liberty Electronics. It's not something I have to make a decision on right now, but I'm always considering it.

"I could even work on Silver Reed printers or move into another computer. I'll just keep looking at the options — I think I have a few years. With about 30,000 computer out there, one percent would be 300. If ten percent remain in use in three years, there should still be enough business for me to continue pretty much exclusively with Morrow computers."

But for now, Jacobs keeps on working on the computers that fill his shop weekly. He supplements that with a good dose of telephone consultations he gives people across the country. Committed to the Morrow computer, Jacobs speaks well of Morrow and its founder. "George Morrow is highly technical and has a high level of expertise in his field. He and his company put together a terrific computer."

For the company that no longer exists, many still survive on the fruits it bore. ■

Morrow Repair Shops

Here's Where to Get Your Hardware Fixed

THE *Morrow Owners' Review* staff has tried to find as many repair shops as possible across the country. We are convinced that additional shops exist that openly service Morrows, and even more that will service them on occasion. This is a free listing for shops, so if you know of a repair shop that services Morrows, peripherals, or other CP/M computers, drop us a line and we'll make sure they get a mention at some point.

NOTE: The list is referenced by state and ZIP code.

California

- **Drive Masters**
  Alan Franklin
  489 S. Robertson Boulevard
  Beverly Hills, CA 90211
  (213) 278-3748
  A "computer orphanage," Drive Masters specialize in systems that no longer have manufacturers' support.
- **Data Systems West**
  Chip Louie
  4529 Van Nuys Boulevard
  Sherman Oaks, CA 91106
  (818) 907-9110
  Complete Morrow service as well as all facets of the PC market.
- **SYSTECH**
  Robert Parker
  1000 E. Walnut, #200
  Pasadena, CA 91106
  (818) 449-3239
- **Computer Memories, Inc.**
  Cesar Bargas
  9233 Eton Avenue
  Chatsworth, CA 91311
  (818) 709-6445
  (818) 700-8482
- **Data Memory**
  Bill Williams
  6130 Variel Avenue
  Woodland Hills, CA 91367
  (818) 704-9500
  Hard disk rebuilds
- **Advanced Computer Repair**
  Mike Nadelman
  1022 Illinois Street
  San Francisco, CA 94107
  (415) 554-0500
  Also repairs virtually all dot-matrix and daisy wheel printers. Stocks many parts.
- **Micro Age Computer Store**
  1150 Contra Costa Boulevard
  Concord, CA 94523
  (415) 680-1489
  Work on printers and computers.
- **MicroComputer Service Network**
  3849 Peralta Boulevard, Suite A
  Fremont, CA 94536
  (415) 797-4724
  Printer repair specialists
- **Faught Data Systems**
  39267-A1 Liberty Street
  Fremont, CA 94538
  (415) 792-7945
- **Civil Computing**
  2111 Research Drive
  Livermore, CA 94550
  (415) 455-8086
  Also does upgrades.
- **Pacific Data Systems**
  Ben Jackson
  6938 Sierra Court
  Dublin, CA 94568
  (415) 828-9410
- **RIX Computer Systems**
  Roger Merriam
  2999 Teagarden Street
  San Leandro, CA 94577
  (415) 357-0971
  "Super service center"
- **Silicon Valley Surplus**
  4401 Oakport
  Oakland, CA 94601
  (415) 261-4662
  Parts only
- **AAA Computers**
  David Milton
  3824 Telegraph Avenue
  Oakland, CA 94609
  (415) 653-3123
  Repairs terminals and monitors only (also some modems). Call for appointment.
- **Track Computer Center**
  (Formerly Silicon Bay Systems)
  Mark Slafkes
  440 Grand Avenue, Suite 401
  Oakland, CA 94610
  (415) 444-1244
  Repairs all MDs and Pivots; especially good with terminals and printers.
- **Jacobs Computer Service**
  Ron Jacobs
  P.O. Box 6092
  Albany, CA 94706
  (415) 525-9425
  See interview with Ron Jacobs in this issue.
- **Berkeley Computer**
  Bill Donner
  1569 Solano Avenue
  Berkeley, CA 94707
  (415) 526-6333
  Drive alignments, MDT20 and MDT50
- **Serviceware**
  720 Aldo Avenue
  Santa Clara, CA 95054
  (408) 988-2251
  (800) 221-8381

Colorado

- **Loveland Computer Center, Inc.**
  1415 N. Cleveland Avenue
  Loveland, CO 80532
  (303) 667-9095
  "Super Service Center"

Georgia

- **Southern Computer Associates**
  Howard Black
  2799 Delk Road
  Marietta, GA 30067
  (404) 952-0412
  Repairs all MDs and Decision 1s; repairs Freedom terminals only.

Indiana

- **Technique Systems**
  209 North Main
  Goshins, IN 46526
  (219) 534-1448

Maryland

- **Micro Repair Service**
  10 Allegheny Ave.
  Towson, MD 21204
  (301) 583-5600

Michigan

- **Office Calls**
  Steve Kiraly
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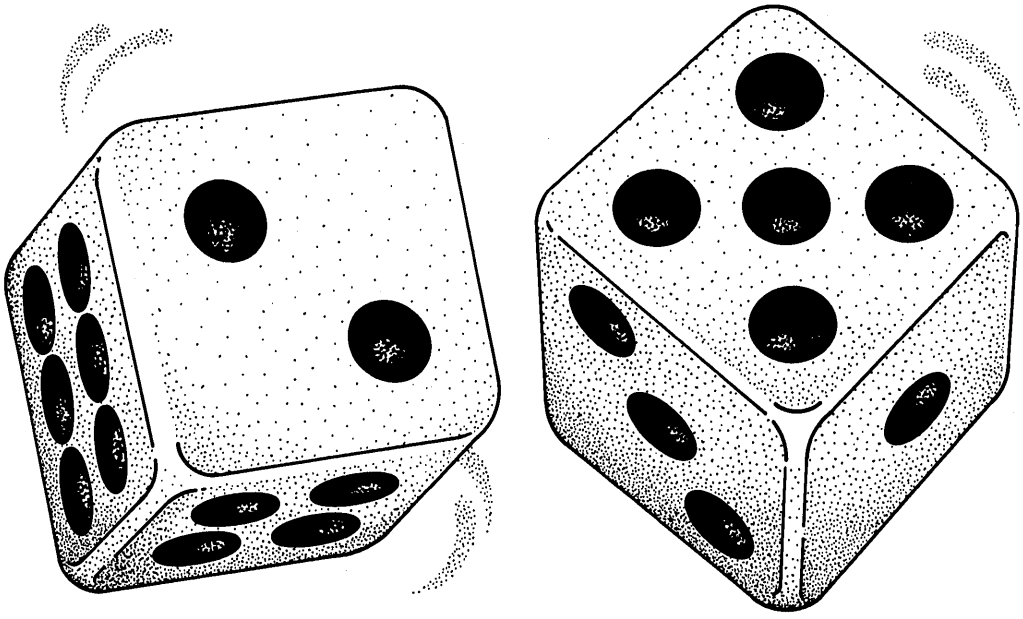

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They Shoot Computers, Don't They?

By Serge Timacheff

"WE'RE crazy — certified mad. It's our customers that are sane," confessed Paul LaVista of **The Bullet Stop** in Marietta, Georgia. There you can walk in, rent a fully automatic machine gun, and blow your computer to kingdom come.

Take, for instance, the fellow who owned a problem-ridden Chinese-built PC clone. He kept sending it to the importer to be fixed, but he still had problems with it. Finally, he took it to the Bullet Stop and had the staff set it up on a gun range. He turned it on to probably his least favorite software program, and then riddled it with bullets from an Uzi or an M16. Afterwards, the Bullet Stop staff kindly boxed up the pieces and sent it back to the importer for the final time.

The Bullet Stop is an indoor shooting range where automatic weapons can be rented and used *legally*. The place has all of the appropriate federal, state and local licenses.

"You can bring anything and shoot it up," said LaVista. "The only requirement is that it has to be dead. Lots of people bring in radios and telephones. During football season, televisions are really popular. We have many people bring in computers and especially printers.

"Many people have trouble running black market computer copies — clones. Many of them are Chinese copies. We get a few Hewlett Packards and IBMs as well as radio shacks and other older models a lot."

In addition to the flat rate of $10 for the gun, there is a $3.50 range fee and $10 to $13 per 50 round box of ammunition. That usually gets you about 30 to 45 minutes on the range. The Bullet Stop stocks a good selection of guns, including H&K's, M16's, MP5's, MP5k's, AR15's, Thompsons (the Chicago Piano or the Master Blaster), grease guns, Uzis, Mac 10's and 11's, and Smith & Wesson 76's. Some of the guns are the old "gangster" style machine guns. Certainly enough to take the "whir" out of even the most reliable disk drive.

The range is set up like a tunnel, with baffles to keep the noise level down. It is 50 feet wide and 25 yards long.

"We set 'em up and let 'em wail away," LaVista said. "One huge hard disk drive unit took 20 minutes just to get onto the range, power it up, and put a box of paper on it.The drive took four people to carry it, it was so big. Once it was going, papers and cards were flying out all over the place. It exploded all over the place."

LaVista's staff cleans up the aftermath. "They never leave the corpse out there."

If this interests you, contact The Bullet Stop, 723 Sandtown Road SW, Marietta, Georgia, 30060, (404) 425-3597.

So you say your Silver Reed's been causing you problems lately ...? ◘

New "Presto" Pop-Up Software

Spectre Technologies of Woodland Hills, California has announced the version 3.0 release of PRESTO, a "pop-up" style program for CP/M. The memory resident program is called a "multi-function software supercharger" and this new version includes substantial improvements, uses less memory, and supports more computers than before.

Once loaded, PRESTO is invoked by a special "trigger" key. The current program is stopped, and an on-screen window opens and waits for a command. Some of the features include a floating point calculator; a programmer's calculator (hex, binary, octal, decimal); screen dumping capability to a printer or a file; a perpetual calendar and clock, a "Rolodex™" type function for cataloging names, addresses, phone numbers and appointments; access to CP/M features such as copy, erase, rename, and directory; and a complete keyboard macro program that lets you define special function keys at any time.

The package costs $39.95 and is available for a variety of CP/M systems, including Morrow, Epson QX-10, Heath/Zenith H-8/19/89, Osborne, Otrona, and Kaypro. Owners of previous Presto versions may upgrade to the latest version for only $5.

Contact Spectre Technologies, Inc., 22458 Ventura Boulevard, Suite E, Woodland Hills, California, 91364, (818) 716-1655.

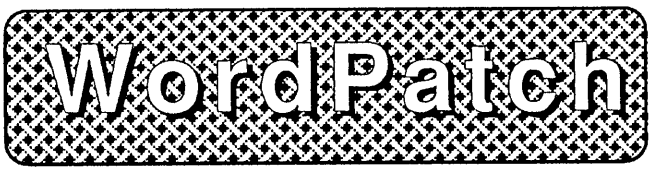
WordPatch — Utility at its Best

Takes Advantage of Your Printer's Potential

By Georgia Babladelis

WordPatch; CMB3 Technologies, Inc., P.O. BOX 3061,WALNUT CREEK, CA 94598; (415) 685-7737; runs on MD2 or other MDs; $49.95.

About two years ago I bought a program called GEM PATCH from Goodnight Designs in Tarzana, CA. I received an 11 page document, with one page of introductory information, one page of print specifications, and the remaining nine pages of detailed, step-by-step directions for patching WordStar to provide special printing effects. With great trepidation, I undertook the patching. It all went smoothly and everything worked beautifully and I was able



to use WordStar to print in condensed or wide type with italics if desired, and continuous underlining. Furthermore, various combinations of effects could be had. I loved it. I felt justly proud of being able to do it and amply rewarded for my efforts.

Now, there is a software program available that will do the patching for you! Yes, it will patch your version of WordStar (from version 2.56 and up) to provide a multitude of printing effects. Moreover, the patching is tailored to your printer. The printers directly supported are Epson, IBM, Okidata, C-Itoh, and Gemini; a list of cross references to other printers is provided, so that most printers are covered. This amazing program is called WordPatch for WordStar. I have WordStar versions 3.0 and 3.3 so I was able to test it on both of those.

Once patched, your version of WordStar will enable you to enter printing codes and print out documents with a variety of print enhancements, such as: elite, condensed, italics, emphasized, underlined, different line spacing, etc. and various combinations of those effects. The example shows a sample on my Gemini 10X.

Georgia Babladelis is the editor of the Bay Area Micro Decision Users' Association newsletter and a psychology professor at California State University at Hayward.

SOME EXAMPLES OF
WORDPATCH FOR WORDSTAR

CONDENSED PRINT MODE

WIDE TYPE

CONDENSED WITH WIDE TYPE

CONDENSED SUBSCRIPT

TRIPLESTRIKE

ITALICS

ITALICS WITH CONDENSED

ITALICS WIDE

ITALICS CONDENSED WIDE

ELITE TYPE

ELITE SUBSCRIPT

WIDE ELITE

EMPHASIZED

It is a simple procedure to patch your WordStar with WordPatch. Instructions are provided and you are, as always, cautioned to use a copy of your working, unpatched WordStar so that you will end up having your original working copy of WordStar as well as your newly created patched WordStar. You are instructed to put the WordPatch disk in the default disk drive and the copy of WordStar in the other drive. That didn't work for me. Once I booted up and had everything set up as directed, I put my prepared working version of WordStar in Drive B and my WordPatch disk in Drive A and got an error message (since WordPatch was not a system disk). So I kept my system disk with WordStar in Drive A and logged on to Drive B, where I had put WordPatch. The program started to work and then quit and gave me another error message.

Finally, using NewSweep, I moved the WordPatch command and the data file for my printer to my system disk containing the copy of WordStar (command and overlays) which I wished to patch. Then, using only my default (A) drive, with the requisite programs on it, I ran the WordPatch command as described in the directions, telling it which printer I had. All went smoothly and I had a patched WordStar in a matter of seconds. *I mean it was fast!*

The original disk you get from CMB3 Technologies has 11 files using 176K space. Since that includes both doc and data files for several printers, it is quite economical to move only the WordPatch command (18K) and the data file for your printer (6-8K) to your system disk containing the copy of WordStar and its overlays that you wish to patch. Obviously, this size of about 24K added to your version of WordStar can be handled either on a single sided or double sided disk drive.

You end up with a patched WordStar command that replaces your previous WordStar command. No longer do you type in "WS" and run it; now you type in WP(*) to run the patched WordStar. The asterisk stands for the initial of your printer. Mine is a Gemini, so I type in WPG and WordStar comes up in the usual fashion including a new message telling me it is a patched version, name of the patch program and company, etc. If you have an Epson, for example, you would end up entering WPE. All of the WordStar files are renamed in this fashion. For example, the message overlay file in my case is now named WPGMSGS.OVR. *That's all there is to it!*

Each user will want to read (and print out) the doc file that is related to one's own printer. After patching WordStar, I printed out GEMINI.DOC which provided me with examples and directions for using the print features. A nice touch provided in this program is the quick accessibility of the print controls while you are working: in the midst of editing a document you may call up all the print features by typing ^P (control P). You will get WordStar's print menu, but now it is expanded and enhanced with the features available with WordPatch.

Several programs are now available that permit you to enter special print controls in your document that will be interpreted by the software print program to print out on your printer the enhanced document as you wish. What WordPatch does is allow you to do the whole works (create the enhancements and print them out) with WordStar alone; that is, by using WordStar's print command rather than changing print programs.

If you have longed to be able to print some word or sentence in italics (or whatever) for special emphasis, here is your chance. Just patch your version of WordStar in a couple of seconds without fear of goofing. I guess we can call this *a patch without panic.* ■

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By Echelon, Inc.

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Free Filer — Sorts Your Work, Keeps You Organized

A Hard Working Automated Filing System

By Walter Blum

Free Filer; Telion Software, P.O. Box 1464, La Mirada, CA, 90637; (213) 547-9673;$49.95.

Interesting thing, serendipity. When I saw the ad in MOR for Free Filer, my first thought was: This might be nice to have around for finding words that get lost in my files. That's about it. So I bought a copy and fired it up (Free Filer is remarkably easy to install). Next day, I discovered another use for the program — and then another and another.

Suddenly, I was hooked.

On the simplest level, Free Filer is nothing more than a glorified version of your word processor's search mechanism. You specify a word or string, and the program plows through the disk — the entire disk, mind you — to find it.

It then displays the word along with the paragraph in which it's embedded, on your screen. You can ask for the paragraph to be written to disk. You can have it printed out. If you're too lazy to think up a filename at the moment, Free Filer will supply you with a default file called SEARCH.DAT. You can also hunt through specific files, rather than an entire disk.

And this is where the fun begins.

Let's say you have a collection of letters, which is how I got started. As you know, business letters customarily begin with a date, followed by a paragraph containing the address of the person to whom you're writing. Was it possible, I wondered, to construct an "index" of all my letters simply by using Free Filer and the opening paragraph as a guide?

It was possible, and here's how.

After the opening paragraph of each letter, I inserted a line containing the date, a brief comment on what the letter was about and a special symbol indicating that this was a letter (I chose ">", the sideways wedge, because of its convenience on the keyboard). At the beginning of the line I typed two dots, so the "comment" line wouldn't print out if I chose to mail the letter (WordStar lets you do this). A typical index entry might look like this (without the brackets):

Jones Widget Company
44 Elm Street
Everytown, CA 91106
[..>January 4, 1985, complaint about widgets]

When I ran Free Filer and asked for the word "widget," up came a listing of all the letters on the subject of widgets — complete with addresses and dates — which I then put in a special file I dubbed LETTERS.RPT. I could also fetch all the letters I'd written in a particular month, if I liked. Or all the letters addressed to a particular city. Or all the letters sent out — period. The only thing I had to be careful of was, if I wanted a *printout* of LETTERS.RPT, I had to open up the file and delete all the double dots; otherwise my invaluable comments wouldn't print.

Here's more. I have a habit of mailing manuscripts to publishers, who then mail them back with nice, sweet little rejection slips — all part of the game, I fear.

To make sure I don't hit these guys up a second time, I type the word "reject" into Free Filer, which when I institute a search, gives me a list of publishers who have turned my manuscripts down. The list doesn't have to be in a separate database file. All I've done is enter each "reject" as a "comment" line (some comment!) attached to my original cover letter. Free Filer does the rest.

However, I *can* use Free Filer to build a separate database, if I wish.

My classical tape collection, which contains over 450 different titles, needed a database. Because it was such a large collection, I first broke the items down into separate files alphabetically (a file for the letter G, for example; an entire file for Johannes Brahms; another for Mozart). Now, whenever I want to make a new entry in the database, I find the appropriate alphabetic file and type it in. I'm not constrained by special formats, by "records" or "fields," as I

Walter Blum is a writer and editor for the San Francisco Examiner *newspaper.*

would be in a standard database. I can type as much information about a tape as I like, or as little, and in any order. The database is free-format; it follows *my* wishes, not its own.

Suppose I want a listing of all the Beethoven symphonies in my collection. Just the symphonies, mind you, nothing else. And (let's be picky), I only want those symphonies conducted by Leonard Bernstein.

OK, I type the words "beethoven," "symphony" and "bernstein" into Free Filer (no need to capitalize; Free Filer understands), hit RETURN, and in no time at all the information appears. Or I may want to know about a piece I taped from a concert some time back in 1985. I think the piece was composed by Ravel, but I'm not sure. I type "ravel" and "1985" into the system and Free Filer does the rest. Or I may want a list of *all* the concertos in my collection. The possibilities are endless.

Free Filer will also combine a database with other files. Let's say I want the "dossier" on a fellow named Jones. I punch Jones' name into Free Filer, and up comes my index of letters to Jones, plus the Jones entry contained in a database of telephone numbers I just happen to have on the same disk.

As a novelist, I've always been on the lookout for some way to keep track of all the elements involved in creating a piece of lengthy fiction — things like plot, characterization, description, theme, etc.

Writing a 400 page novel can be a real challenge to the memory, as any writer will tell you. A character might appear on page 35, disappear, then turn up again on page 324 — and can you remember how he looked? Do you know what he said? Free Filer digs up the description or the dialogue, and flashes it to you on the screen.

I found I could also keep a running synopsis of the novel's plot, too. All I had to do was insert a sentence or two as I went along into the body of the manuscript. At the end of the synopsis line I would type my symbol for "plot" — let's say #, a pound mark. Then, whenever I needed to know how the story was coming along, I would simply type # into Free Filer, sit back and wait for the plot summary to appear — in its entirety — which I could then print out. Later, I'd go back, run a search, root out all the insertions in the manuscript and delete them.

I'm using Free Filer for research as well. Each time I make a note, I enter it with a symbol that I can track down later with Free Filer. At first, I thought I'd work up a different symbol for each subject — all those nice symbols like @ and # and + that, as a writer, I don't use very often. But when I realized I was going to have to memorize a slew of symbols, — and I'm a lousy memorizer — I took the coward's way out. Now for the desctiptions I'll type /d (I chose the slash mark because it doesn't require shifting, and I'm violently opposed to work), and for characters I'll type / c. For plot, /p. Get the picture?

We're talking about searching just one disk. That's fine up to a point, but what if you need to look through more than one? A later incarnation of Free Filer (Version 5) lets you store what you've found in an output file, switch disks and continue searching — indefinitely, if necessary. I've searched for a particular item through six different disks (there appears to be no limit), after which Free Filer appended everything into one file and presented me with the results. Now that's fancy searching.

Version 5 also has a neat little refinement, the "combination" option. Let's say I want all the pieces written by Mozart — *except* the piano concertos and symponies. I ask for a "combination" option, then type "mozart" *but not* "piano concerto" *or* "symphony." Free Filer scoots around, finds all the paragraphs where the word "mozart" appears and discards all the piano concertos and symphonies.

The tricky part involves the word "OR." If you specify AND, Free Filer presents you with just those paragraphs where all three words appear together — "piano," "concerto" and "symphony." With Free Filer, you get a quick lesson in basic logic for no extra charge.

There are many little options in the program. "Autowrite," for example, automatically writes all you search matches to a disk file you specify. And "Fsort" sorts an output file's contents alphabetically; I don't have much use for a sort, but I can see where it could be useful.

What fascinates me about Free Filer is the basic idea. A simple program with a multiplicity of uses, as many as you can dig up with your imagination. ■

```
*****************************************************************
*                                                               *
*                      Default Setting Menu:                    *
*                                                               *
*                        BOUNDARY OPTIONS                       *
*  1 ... Boundary markers                                       *
*         Beginning boundary marker ===> <cr> <cr>              *
*         Ending boundary marker ===> <cr> <cr>                 *
*  2 ... Omitting the boundary markers                          *
*                                                               *
*                          FILE OPTIONS                         *
*  3 ... Ignoring ".BAK" files                                  *
*  4 ... Inserting the file name in output files                *
*  5 ... NOT Auto writing the entries to disk                   *
*  6 ... NOT Printing the output file on the printer            *
*                                                               *
*                        SEARCH OPTIONS                         *
*  7 ... Search type current is an AND search                   *
*  8 ... NOT sensitive to upper/lower case                      *
*                                                               *
*                          MISC. OPTIONS                        *
*  S ... Save a new, permanent version of Free Filer            *
*  H ... Help with any of the above options                     *
*                                                               *
*****************************************************************

SOURCE FILE ----> B:JOHNSON.MEM
Joe:
You might be interested to know that Free Filer has been at the
top of my list of excellent file management programs, and I would
not be without it.


SOURCE FILE ----> B:JONES.LTR
I have written to you several times about Free Filer, but without
hearing a reply.  I would very much appreciate your opinions on
this excellent program as soon as possible.


SOURCE FILE ----> B:SMITH.LTR
As I mentioned to you last week on the phone, I am now using Free
Filer and find it an excellent way of keeping track of my
correspondence.  I think you might give it a try.
```

MD Hard Disk Hot Tip

Keeping your Hard Disk Healthy

Hard disks can easily live three to five years, but within that time you could easily get disk errors. The heads may become slightly misaligned or the disk can get too fragmented. The latter happens when you have deleted and created a much larger number of files than the disk can hold, causing the files to become scattered in little pieces, instead of being contiguous.

Why is that bad? It takes longer to retrieve a severely fragmented file and the disk head moves a lot more, causing more wear and tear. What to do about it? Back up your entire disk with FULLBACK (for extra safety do same with NSweep), then RESTORE the disk, a process which begins with a reformatting of all tracks. How often should you do this? Heavy users at least every six months; normal, steady users once a year. You may get away with doing it less often, but you'll never know until it's too late.

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Important Announcements

NEW MOR PROJECTS IN THE WORKS

MOR is about to embark on two hardware projects. The first is the Mike Allen Clock Kit (MACK), which we know is as solid as the truck but will only cost about $49. Mike is looking for a supplier for the PC boards and plans to write the assembly instructions. This computer clock already runs successfully in MD3, MD5 and MD11 computers and is described in MOR Vol. 4 # 1, February 1987, page 35; programs and schematics are in files on FLOB FEB87 #9 (product 4109). MOR is also considering bringing about a Z280 based Morrow ULTRABOARD, hopefully in cooperation with High Tech Research of Redding, CA. Read the FOREVER-Z column to learn what the Z280 chip and ULTRABOARD are all about. Write MOR if you are interested in getting this $400 to $500 add-on board, or in the MACK clock kit.

PROGRESS IN ZCPR3

A new ZCPR version, ZCPR 3.3, will be available soon from MOR. It is an expanded update of ZCPR3. To learn about its new features read Z-News from Echelon, April 1987 issue, or get in touch with Rick Charnes, our FOREVER-Z columnist.

Work is also in progress on the Rev. 1.1 MD2 version of ZCPR3. Several people have written to tell us they want it. Maybe ready early this summer.

More MicroPro NewWord/WordStar News

As you may know, MicroPro International, manufacturer of WordStar, recently bought NewStar, who produced NewStar. MicroPro recently released WordStar 4.0 for DOS, based on NewWord code, and a CP/M version is due out at the year's end. NewWord, in the meantime, is available from MicroPro through the distributor Software Resource in San Rafael, California.

The NewWord versions for sale are NewWord 2.17 (for CP/M 80) and NewWord 4 (for CP/M 86). If you have an earlier version of NewWord, you can upgrade to either of these versions for $35 through MicroPro. If you want to upgrade from NewWord to WordStar 4.0 (for now, only the DOS version is available), it's $89. Brand new, NewWord is $249, and it includes other goodies such as The Word Plus (see article on page 29). If you have questions, call the MicroPro toll-free customer update number, (800) 227-5609. Stay tuned for more updates — they're bound to occur.

Classified Ads

PLACING A CLASSIFIED? Private party ads cost $2 per line. Commercial ads cost $6 per line. ALL ads that sell something for profit are considered commercial. Specifications: 50-character maximum per line, 10-line maximum per ad. Include a check or money order with your name, address and phone number (make sure we can distinguish your ad from your other information). Send a SASE if you want a copy of your ad.

Personal Pearl Data Base design, setup, training, consulting. Bruce Gowens, (415) 268-9450, P.O. Box 5367, Berkeley, CA, 94705.

Morrow MD2 with MDT50 (Freedom) terminal. All original software & manuals, plus much additional software & manuals. $450 or best offer. Lee Darlington (818) 887-0541.

MD3 & MD3 portable. $750 ea.; **MD2(2)** $450 ea.; all software; also **Zenith Z-100**, 8087, CP/M & MS-DOS, color software, $1500. All are dealer demos. Will consider all offers. (707) 937-5001.

MD3 w/MT70 terminal. All usual software, Mannesmann Tally Spirit-80 printer, 300-baud Volksmodem w/communications software. Total package $1100 or best offer. For info. call (602) 459-6845 or write 113-B Winrow Road, NBU 35-I, Ft. Huachuca, AZ 85613.

FOR SALE: Enhanced MD11 with MT70. Excellent condition with all bundled software and manuals. Software options include dBASE II, Multiform, and SmartKey/SmartPrint. Hardware options include 1meg RAMdisk (with SuperCalc2 and Superfile), Mor-Clock, 8088 coprocessor, and external 11 meg hard drive. Asking $900 or best offer. Will install options or sell them individually. Mark Mecord, 7988 La Rivera Drive, #263, Sacramento, CA 95826-1636, (916) 381-8540.

Morrow MD11 w/MDT60 terminal. Perfect condition. Owners manual, CP/M 3.0 origianl softwaree plus RM Cobol, SmartCheckbook, Real World Payroll, Print Master and Meal Planner. Best Offer. (521) 431-1798.

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The Morrow Owners' Review staff heartily wishes Carolyn Shaffer and Publisher Sypko Andreae the happiest and most fruitful life together imaginable.

They will marry on June 6 at the Rustridge Winery in St. Helena, California, amidst wilderness, wine, horses, and a huge, joyful group of friends and relatives.

Sypko has been Publisher and Editor-in-Chief of the Morrow Owners' Review since its inception. He also pursues a full-time career at the Lawrence Berkeley Laboratories as a computer scientist. Sypko is originally from the Netherlands.

Carolyn pursues a successful career writing children's books and marketing communications. She is from California.

Both of them enjoy a variety of activities, including river rafting, soaring, cooking and cross-country skiing. They live in Berkeley, California.

Sypko and Carolyn, we surely speak for our readers as well as the MOR staff when we toast you both with printer's ink, offering you our very best!

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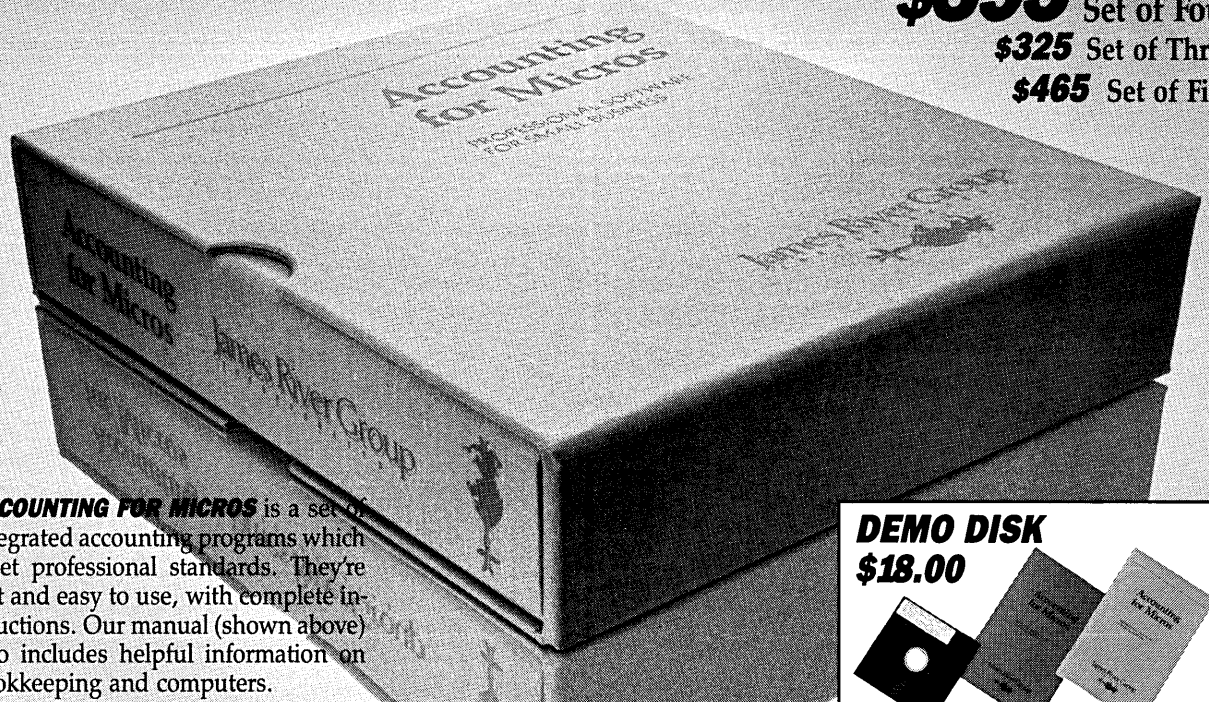

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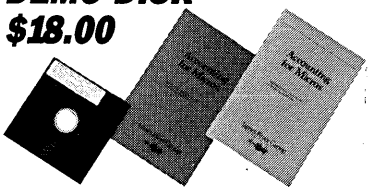

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