

The Z-Letter

Number 1

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WELCOME!

Welcome to The Z-Letter! This is the first issue of a monthly newsletter for the 8-bit or CP/M-compatible community. Everything in this issue is copyright (c) 1988 Alpha Systems Corporation, 711 Chatsworth Place, San Jose, California 95128, phone (408) 297-5594.

The purpose of this magazine is to spread the news about new developments in the community, and to help newcomers get the most out of their machines. To that end, every issue will contain a news column, one or more articles, and a letter column. The news column will spread news not only of new products from us (that is, Alpha Systems Corporation), but all news of new programs and machines that comes to our attention. The articles, we hope, will be written by many people. So send us the news about your new software or hardware, your opinion of someone else's product, that article you've been meaning to write, your praise, gripes, or just plain questions! This is the place.

ALPHA SYSTEMS CORPORATION

Alpha Systems Corporation, since 1979, has been dedicated to development of microprocessor-based eight-bit computer systems including Intel's 8080, 8085, 8048 and 8051, Zilog's Z80, Z8 and Hitachi's 64180.

Since 1984, we have concentrated entirely on the software side of eight-bit system development. Alpha Systems Corporation developed the first Z-System offered by a computer manufacturer, the Ampro Little Board. In 1985, the MicroMint SB180 system software was developed here. The ON! System software is largely a product of Alpha Systems Corporation. Z3-Dot-Com, Z-Com and NuKey were written here. So much for our credentials.

The Z-System has its roots in CP/M 2.2 and 3.0. CP/M was the first really useful operating system for eight-bit micros. Until the advent of Intel's sixteen-bit 8086 and its IBM following, all serious small computers ran under eight-bit CP/M.

We do not take particular issue with the argument that ATs offer more memory, more speed, more of whatever. IBM and the clone makers are spending hundreds of millions of dollars to present 'more' to the marketplace. So be it.

We are of the mind that more is not necessarily better. A sailor may love the sea, but a drowning man would certainly appreciate less water around him. A sixteen-cylinder Ferrari with a flat tire is not as attractive as a Chevrolet with eight cylinders and no flats, if you need to go somewhere. Given the myriad things small computers can do and our own particular needs and preferences, 'bigger', 'newer' or even 'faster' don't mean much. 'Better' is what we are after. More useful, easier, more fun, better for us in our own personal context.

It is in this vein that Alpha Systems Corporation offers the Z-System to you.

The Z-System is a full, rich and growing operating system environment for eight-bit systems based on the Zilog Z80 (or compatible) microprocessor. Proud of our heritage, the Z-System supports virtually all CP/M programs. Furthermore, practically all active CP/M public

domain authors provide support for Z-System features in their programs.

Due to the demonstrated popularity of the Z-System, industry leader MicroPro released WordStar 4.0 last year, with Z-System support. They reportedly sold over ten thousand copies of it in two months. To paraphrase Mark Twain, "Reports of our death are somewhat exaggerated." -- Joseph W. Wright

ABOUT THE PUBLISHER

Joseph W. Wright (Joe to his friends) is the founder and president of Alpha Systems Corporation, as well as the publisher of The Z-Letter. Joe is an open, friendly man who puts together new computers the way most people screw in light bulbs, and designs system software with less trouble than most people have balancing their checkbooks. As far as his accomplishments go, read the description of Alpha Systems Corporation above. Alpha is Joe's company, and its accomplishments are his.

ABOUT THE EDITOR

David A.J. McGlone earns his living at Tandem Computers, Incorporated, in Cupertino, where he is a Software Technician, a title invented to describe what he does for the software development group for which he works. David comes from a much later generation of computer users than Joe; his first home computer was an Eagle III purchased in 1981. Besides being the

editor of The Z-Letter, David programs in BASIC, COBOL, and Pascal. He has been the editor of the Eagle Computer Users Group newsletter for over a year.

HOW TO SUBMIT MATERIAL

The deadline for submission of material is one full week before the end of the month. We cannot pay for articles, but for every article we publish, the author will receive that issue of The Z-Letter free. If the author has a subscription (see below), the subscription will be extended for one issue.

Material may be submitted printed or typewritten on clean white unlined paper. However, this is not the way I prefer to receive them, because then I have to type them into my computer. Submissions will be favored that are received on diskette in any 48-tpi or 96-tpi format known to Uniform, such as Kaypro, Ampro, Micromint, Epson QX-10, Eagle II, or Eagle III. Please label the diskette carefully with your name, address, phone number, and the format it's written in. Sorry, diskettes cannot be returned.

Diskette files can be in WordStar format. However, standard ASCII files, with no control codes, and carriage returns only at the ends of paragraphs or marking blank lines, are preferred. Most word processors can save files in this format. If you have Spellbinder, this is the normal file format.

Mail letters, articles, and news for The Z-Letter to: David A.J. McGlone, 720 South Second Street, San Jose, California 95112.

SUBSCRIPTION RATES

Subscriptions will be accepted for 12 or 24 months. A subscription starts with the first issue after the subscription payment is received. The cost is \$24 for 1 year, or \$48 for two, for subscriptions mailed to U.S., FPO, or APO addresses. Subscriptions mailed to addresses outside the U.S., including Canada and Mexico, cost \$32 for 1 year, \$64 for two. Back issues cost 1/12 of an annual subscription; \$2 in the U.S., \$2.67 foreign. There will be an index to The Z-Letter, updated every issue; its availability and price will be announced after each year of publication.

Subscriptions should be paid by check or international money order in U.S. dollars, mailed to: Alpha Systems Corporation, 711 Chatsworth Place, San Jose, California 95128.

NEWS

FRANK GAUDE FOLDS HIS HAND

Echelon, Inc., for many years the owner of the trademarks and rights to the parts of the Z-System that were not public domain, has folded. With it goes **The Z-News**, the biweekly magazine that Echelon published (Z-News 809, 14 March 1988, was the last issue). Frank Gaude, the president and founder of Echelon, has retired.

Echelon has signed its rights and trademarks over to Alpha Systems Corporation, which will continue Echelon's work of serving as a central resource for the eight-bit community. In addition to developing software, which it has been doing all along, Alpha has started its own newsletter, The Z-Letter. Orders and subscriptions sent to Echelon are now being forwarded to Alpha, which will fill them as quickly as possible. Z-Node Central is being moved to Alpha's premises, a data base of resources is being organized, and a catalog of available software is being prepared.

JOE WRIGHT FINISHES NZ-COM

Alpha Systems Corporation has been filling orders for Z-Com since June with New Z-Com version 2.0 (NZ-COM), a virtual revolution in operating system design. Like Z-Com, NZ-COM installs itself on all CP/M 2.2 computers in seconds, giving the user a full Z-System without any modification or assembly. New features include dynamic reconfiguration of the system on the fly, including the ability to drop back to CP/M for a memory-hogging application program and then returning automatically to the Z-System after the program is done. For \$69.95 plus \$4 shipping and handling plus sales tax (for California residents only), the NZ-COM package includes ZCPR 3.4, ZRDOS 1.9, a very clear and well-written manual by Jay Sage and Bridger Mitchell, and a large assortment of utilities.

BRIDGER MITCHELL FINISHES Z3PLUS

Z3PLUS is like NZ-COM, but specifically designed for CP/M Plus (3.0) computers. It installs on all CP/M Plus systems in seconds. This makes it possible, for the first time, to migrate from CP/M Plus to the Z-System, a feat that was said to be impossible. Between NZ-COM and Z3PLUS, the Z-System is now available to almost anyone with a Z80 (compatible) computer system. Z3PLUS comes with ZCPR 3.4, but NOT ZRDOS 1.9; due to the differences between a CP/M (2.2) BDOS and a CP/M Plus BDOS, Z3PLUS must retain the CP/M Plus BDOS instead of replacing it with ZRDOS.

Z3PLUS is priced the same as NZ-COM, at \$69.95 plus \$4 shipping and handling, plus sales tax is you live in California.

NEW ZRDOS 1.9 READY

In connection with writing NZ-COM, Joe Wright has updated ZRDOS, originally written by Dennis Wright (no relation). This latest public ZRDOS features improved character I/O and disk-error handling, as well as support for Plu*Perfect Systems' BackGrounder ii.

Perhaps the most important change, in the long run, is the elimination of two of CP/M's critical limits. Under CP/M 2.2, no file could be larger than 8 megabytes, nor could any disk drive be larger than 8 megabytes. With ZRDOS 1.9, a file can be as large as 32 megabytes, and a disk drive can be as large as a gigabyte (1024 megabytes). While no current BIOS

supports such large drives, now at least such a BIOS is possible.

JAY SAGE FINISHES ZCPR 3.4

The latest incarnation of the Z-System command processor is not "just an upgrade" of ZCPR3. ZCPR34 is the heart of the new Z-System and was rewritten specifically for NZ-COM and Z3PLUS. As such, it represents many advances and some new approaches in computer operation. With ZCPR 3.4, we get "Type 4" utilities. These are different from Type 1 utilities, which always load at 0100 hex, Type 2 utilities, which had the environment descriptor built into them, or Type 3 utilities, which can be assembled to load at some address other than 0100 (these were introduced with ZCPR 3.3). Type 4 utilities load at NO fixed address. Instead, they examine the system when invoked, at load themselves just below the command processor!

PROGRESS IS MADE, SAYS ZILOG

Mr. Barbeen Gupta, Technical Marketing Manager of the Z280 group at Zilog, recently answered questions we had. Yield on the Z280 is still pretty low; this is reflected in the unit price of the current version of the chip. Revision H of the Zilog 280 16-bit Z80-compatible MPU sells for around \$20 to \$25 apiece. As long as interest in the chip remains high in Europe and Japan, development will continue (interest in the U.S. is low, due to the stifling effect of Big Grey on technical innovation). Revision J, due any time now, will correct some bugs in earlier releases, and a price reduction is possible.

Mr. Gupta (pronounced "Hoopta", by the way) also explained what a Z180 is. This chip is a joint project of Hitachi and Zilog, which fixed the timing problems of the HD64180, and some other modifications. The revised HD64180 is sold by Hitachi as the HD64180Z; Zilog markets it as the Z180. These chips, an improved version of the CPU in Micromint's SB180 and SB180FX, sells for 5 or 6 dollars.

NEW IOPS AVAILABLE

New versions of the Input/Output Recorder (I/OR[™]) and NUKEY are available. A new version of the Print Spooler (B/Printer[™]) is in the works. The price remains \$39.95 apiece, or \$89.95 for all three, same as in Echelon's catalog.

Version 1.4 of NUKEY fixes some bugs found in the earlier version.

The new I/OR is made necessary by NZ-COM. RECORD.COM, which turns on and off the recording of characters sent to the CRT, printer, or both, still works under NZ-COM. But you must create an IOP first, using RECORDER.COM, and load that IOP, before RECORD can do its job. It is RECORDER that does not work under NZ-COM. RECORDER wrongly assumes, when making the IOP, that the environment descriptor falls on a page boundary. Under NZ-COM, 'tain't necessarily so. The new ZCORDER.ZRL is a prefabricated IOP ready to be loaded by NZ-COM, eliminating the need to run RECORDER at all.

B/Printer suffers from the same problem, only worse; a similar fix is in the works.

NEW BALIAS AND OTHER NEAT STUFF

Skunk Creek Computing Services has sent Alpha version 2.03 of BA (Build Alias), a program that lets you use your editor, or any editor, to write aliases. Unlike ALIAS and VALIAS, which have their own commands, or SALIAS, which uses the WordStar set, with BALIAS you use your customary word processor. You make an ASCII text file of the command script; the upgraded BA combines it with an skeleton alias to make the alias you run. Ambiguous script names are accepted, allowing you to make several aliases at once. The script file is available for documentation. The price is \$12.95.

Other Skunk Creek products include (according to the file PRODUCTS.DOC that came with the new BA):

PERSETtm creates free-standing programs to send any control sequence to any I/O port, for setting up terminal function keys, selecting printer options, and testing the hardware. Control file support for repeated operations. For ZCPR3, Z-System, CP/M, \$26.95

SORTMKtm orders small ASCII text files on as many as nine sort keys in ascending or descending sequence. The files can be as large as 20K, depending on the TPA. SORTMK is fast; 200 lines of text are sorted in 20 seconds (6MHz Z80 CPU). Control file support for repeated operations. For ZCPR3, Z-System, CP/M, \$19.95

NSURVEY keeps a data base of what file name is on what diskette, as do other cataloging programs. NSURVEY also catalogs all directory areas, and keeps the CRC and size of the files. Files may be searched for by disk, name, CRC, directory, or size. NSURVEY tracks down files that have not been updated, or broken. Entries may be deleted by name or disk identification. Control file support for repeated operations. For ZCPR3, Z-System, CP/M, \$28.95

PRODUCTS.DOC explains that "control file support" means that programs so designated operate either from the usual parameter line calls or from a CTL file that contains the parameters. This feature allows automating operations unique to the directory, and to document what parameters were used for an application.

To order these products, to inquire about the policy for multiple purchases, or to inquire about updates, contact Skunk Creek Computing Services, 1985 Kohler Drive, Boulder, Colorado 80303-5240. Shipping and handling for a single purchase is \$4. Colorado residents pay tax.

ALPHA ISSUES INVITATION TO USER GROUPS

Alpha Systems Corporation has established the Z-PLAN for user's groups. This plan benefits both Alpha Systems Corp. and the user groups that participate in it, by encouraging people to join the user's groups, encouraging people to buy products from Alpha, and keeping Alpha and the user's groups up to date on each other's activities.

While details are still in flux, the basic idea is that Alpha will purchase a membership in every participating group, and every participating group will become a discount dealer for Alpha. Since the benefits of the plan only extend to members of the group, attendees who are not members will be encouraged to join the group. Since Alpha's products will be available through local user groups, people will be more likely to order them.

Groups interested in this idea should write to Alpha Systems Corporation, 711 Chatsworth Place, San Jose, California 95128, or download the file Z-PLAN.DOC from a Z Node and fill out the application therein.

Starting next issue, a column in The Z-Letter will publish the information about as many groups that respond as space allows.

LETTERS

The letters that follow were not written for **The Z-Letter**. I culled them out of correspondence sent to Alpha Systems Corporation, usually accompanied by orders for NZ-COM, and correspondence sent to Echelon and forwarded by Frank Gaude to us. I hope that next issue will have letters written expressly for **The Z-Letter**. Send correspondence to: David A.J. McGlone, 720 South Second Street, San Jose, California 95112. The editor and the publisher reserve the right to edit letters received to conform to standards of taste,

decency, and language. We will NOT distort the meaning of any letter; we'll simply not print it first. If you are not willing to have any letter you send me printed, or edited when printed, please say so in the letter. All other letters will be assumed to be for publication and become the property of Alpha Systems Corporation upon receipt.

Dear Z-Newsionians,

Item one on my list is to convey a big pat on the back to you for your genuinely uplifting spirit of user support; rare and commendable. I salute you.

Next I had better tell you what I've got and why I am writing, later I'll fill in with what I'm doing and who I am.

I'm using an SB180 (no FX suffix), which I purchased with the full Z-System software package. I have release 4.

I have a very busy job, and my Z-time has been nearly nil for about a year now. My subscription even lapsed (more on that later). In that time, I've added to my job, the duties of System Administrator for a pair of Unix machines (Silicon Graphics) that we use for TV animation sequences. Getting up to speed on all of this kept me from tinkering in Z-System, but also made appreciate it more (I love Unix, but Z is the small-is-beautiful OS).

Now I would like to make my SB180 really hum while I wait for who knows what to come down the pike. I'm going to get the 9 MHz speed upgrade, WordStar 4, and for the rest I would like your advice. Having been out of touch with the developments, and wanting to get back on track quickly, I would appreciate your input, so that I can do this all at once and get on with things. I would like to renew my newsletter subscription, and get all the issues that I've missed since my (sigh) expiration.

My applications: writing letters, programming (Pascal and shifting toward C), some semi-homebrew projects. I stay away from spreadsheets and data bases.

By the way, this letter was written and printed from my vintage Radio Shack Model-100 laptop (it must be about six years old now). There is no better tool for a quick letter. Of course you must have 60*10 screen software (Ultrascreen) running on it. So far it's the only laptop I've used that didn't make me wish for a desk to put it on. Instead of writing at my desk, I've been sitting out on the front porch of my big old victorian house, smelling the profusion of old roses that grow on the railing and in the yard. Surely a bouquet that rivals that of the finest Zinfandels.

Thanks,

Stephen G. Beuret
4831 Cedar Avenue
Philadelphia, PA 19143

Well, Stephen, I'm sure Echelon appreciated the pat on the back. I hope that you will feel that Alpha is carrying on Echelon's work in such a way that we will earn the same praise. Your subscription renewal, and the others Echelon sent us, will be dealt with as subscriptions to The Z-Letter, since Z News is no more. As for advice, I'm afraid anyone you ask will have different recommendations. Joe uses WordStar 4.0, dBase II, and programs in assembly language. I prefer Spellbinder 5.3 and Selector V, and do most of my programming right now in TURBO Pascal and Nevada COBOL, not having had the time yet to get into assembler. I hope that helps. -- DAJM

17 June 1988

Dear Joe,

I am the president of a group called CCP/M in Connecticut (Connecticut CP/M Users' Group). I and many of the members of my group appreciate the work you and others are doing for the 8-bit enthusiast.

I understand Echelon is going thru some changes. I have read your NEWEI and NEWS files and only want to say -- carry on! Whatever differences exist between you and Frank, may they not slow down the exciting ideas you and others are promoting!

If I can be of any assistance in promoting your products, let me know.

I am enclosing the most recent issue of the joint newsletter my group and another CP/M group publish.

We are the outfit that put on the first (annual?) Z Festival. I have in the back of my mind a visit by Joe Wright and Bridger Mitchell and Jay Sage for the second Z-Festival!

Sincerely,

Lee R. Bradley
24 E. Cedar St.
Newington, CT 06111

As you can see, Lee, the changes are even bigger than you might have guessed. Echelon is gone from the scene completely, with Alpha carrying on where they left off. As for helping promote our products, simply spreading the word that Echelon may be gone, but 8-bit computing is not dead, is the most important thing you can do at this stage. "Things are happening -- watch this space!" There is a definite role planned for users' groups; see above, in the news column. I look forward to meeting you if that second Z-Festival comes off. -- DAJM

Joe Wright, et al,

Am enclosing \$75 as payment and handling for the new NZCOM/Z33, which I have seen mentioned on Jay Sage's RAS at \$69.

I certainly encourage you to consider some kind of newsletter from your company. There is no question but that Z-News, quirky and erratic as it was, provided a means of uniting the dwindling Z user group. While some of course communicate often through PC Pursuit, that number is a small minority of your potential customer base.

I join with many others in Seattle, most of whom I know being "focused" on Adam's RiBBS (the unofficial Seattle ZNode) at (206) 882-3684, in wishing you much luck in your endeavor.

Sincerely yours,

Michael Broschat
2610 E. Aloha
Seattle WA 98112

Thanks, Michael, we'll need it! Seriously, this job we've taken on is so big, it scares me a little. We'll take all the luck (and the help) we can get. On another subject, here's the first issue of our newsletter; how do you like it? Joe and I are hopeful that, with enough products like NZ-COM and Z3PLUS to make it easier to switch to the Z-System, with a large enough subscriber base and with the user groups and bulletin boards spreading the word, the "potential customer base" may expand to include all CP/M users, plus enough new users to keep the whole thing going. -- DAJM

The 4th of July in 1988

Dear Joe:

What you have down here in San Diego is your basic computer ignoramus surrounded by a dozen (give or take) Kaypro-10s turned into K-44s, K-88s, and such; two S-100 systems with 50 shorboards as yet uninventoried (several experimental boards); a PC/AT-286 with 126 MB on two fixed disks and 3074K RAM (540K plus 2 MB above); a bunch of modems, two being USRobotics Courier HST 9600s; a half-dozen printers (one in use); a collection of "public domain" (misnomer, usually) and proprietary software fairly blanketing CP/M 1.4, 2.2, 3.0, and 86 -- and MS/PC-DOS, naturally -- double-backed-up on numbered, cataloged floppies; and microcomputer hardware and software and systems experts of national renown (one or two gainfully employed, rumor has it) who visit now and then the way people go to zoos (habit, unproductive, sometimes amusing).

And more ... books, manuals, journal collections predating electric typewriters, AND PAPER (!!) having something or another to do at one time to someone we wistfully believe as an act of faith but wouldn't bet on having to do with computers or computer persons or persons who met a computer person at least once than there are WordStars with MailMerge never used more than three times.

Once I was a reference and textbook publisher who knew his business well. Helped build several good companies and helped their owners

sell them for cash money to Time, Inc., Scott, Foreman, and even the American Broadcasting Company (twice -- same company -- dull story).

But then I started laying awake at nights, staring at fuzzy dimnesses fuzzing around about a foot below the ceiling in my bedroom when the light was off wondering over and over again, "What the hell ever happened to the computer revolution? How come almost none of the more than 600 or 700 scientists, researchers, academicians I know pretty well as authors and editors of some damned important stuff still use filing cabinets and send patient data from clinical trials to their colleagues by mail or bicycle messenger even though their universities, hospitals, and research institutes have microcomputers in them somewhere -- and modems somewhere else -- and how come none of their modems are ever connected to a telephone line out one end and a computer out the other -- and how come most of them say, huh, when I say modem, huh?"

... HOW COME!??

That was 4 years ago.

The idea is refereed software. Worthwhile programs. Pragmatism. Quality that speaks for itself. Prices around \$25 to \$45 max. Some free but REALLY protected. Effective marketing that doesn't cost more than 15% of net sales, budgeted realistically. Distribution networks that let middlemen make a buck. Royalties. A reputation created by customers and authors, not by a vice-president for public creations.

Common Sense. Tuesdays and Thursdays, anyway. A hell of a lot of fun every day. Feeling good about doing good. Pride. With a smile.

And if someone really wants to wear a necktie ...

Naah. Ya gotta draw the line somewhere.

Drop me one sometime or we can message around on Z-Node Central some days and one or more of The Caves of CP/M on others.

I was born December 23, 1937, and figure I've fiddled around long enough, so I'm gonna do this anyway. Honest.

Ted Logan Publishing Consultants
4560 Muir Avenue
San Diego, CA 92107

I agree, Ted, the line must be drawn somewhere. With any luck, the necktie types are all going nuts trying to get Big Grey's machines to work right. Meanwhile, people like you and me are getting things done with the Z-System.

In answer to your query about modems, remember how understaffed and overworked most places are. It's all very well to say that these things should be computerized, but who's going to do the work? Someone has to set up the system, someone has to design the data base, a whole lot of other someones have to type in all the data, and keep typing it in as new data is

generated, correct mistakes, fix bugs in the programs, repair machinery, and the list goes on and on. Most hospitals, universities, and research institutes have all they can do to get the money for the people and equipment to accomplish their primary mission (as we used to say in the Army). When you can't get doctors and X-ray machines, you don't worry about whether your patient records sit in a computer or a file cabinet, believe me.

There's another reason that the files are in file cabinets rather than in computers. While some people interested in computers tend to think of them as replacing paper, many people look on the computer more as a tool for making the production of the paper easier. The use of a computer to generate this newsletter, which is mailed on paper, not on a diskette, is an example of this. Hence you get computer-produced reports filling file cabinets, and records are transferred by sending the reports, rather than transmitting the original data. In all truth, a piece of paper can hold so much more information than a standard CRT screen, that I don't know if the computer will ever replace paper. -- DAJM

Dear Sirs:

I am the frustrated owner of two CP/M computers, a Kaypro4 and a Kaypro1. The frustration is due to the fact that, while the computers themselves are excellent, reliable machines, software is getting hard to locate.

You can imagine my joy when I read in the June '88 issue of Profiles that you have a selection of such software. Please gentlemen, send me your catalog.

I have searched through many of the current computer magazines without running across your name, at least as a source of CP/M programs. Where do you advertise? I've looked in Computer Shopper, Inputter, Profiles, and any other general interest computer publications I could find.

Maybe you don't advertise because you don't feel there's a market for CP/M. Well, think again. I purchased my Kaypro1 just last November because it was being dumped by the manufacturer cheap. Lots of us out here don't need a \$1000 MS-DOS machine when so many perfectly adequate functional and inexpensive CP/M units are available either used or as manufacturer closeouts. Let us know you're around and we in the secondary market can still be counted on to buy software. After all, look at the money made by manufacturers who supply parts for old, outdated, used cars. Just because it ain't state-of-the-art don't mean it's dead.

Yours Truly,

Christopher A. Meissen
P.O. Box 66
Colon, NE 68018

The problem with comparisons between cars and computers, Chris, is that cars have really changed very little in basic performance any time recently. The range of performance and features among most cars and trucks is comparable to the range in PCs (that is, Big Grey's machines and other manufacturers' compatible clones); it doesn't approach the range of the earliest S-100 machines, to today's S-100 machines, the PCs, the CP/M and Z-System machines, the Apples II and Macintoshes, Commodore's machines, Atari's machines, the TRS machines, etc. I agree that not state-of-the-art does not mean dead. On the other hand, the Z-System IS state of the art. Believe me, there are features in the Z-System only seen in mainframe computers. Some of them, such as the dynamic memory mapping occurring under NZ-COM and Z3PLUS, are very rarely seen even on the newest mainframes.

We aren't advertising anywhere yet. This will change when we have enough money and time to invest in it. Anyway, that's up to Joe.

We'll send out catalogs as soon as they're ready. Right now, we have to go through the stuff in Echelon's catalog and see what we have, what we don't, what we can get, etc.

-- DAJM

Trademarks: B/Printer, I/OR, NuKey, NZ-COM, Z3-Dot-Com, Z3Plus, Z-Com, ZCPR, ZRDOS, Z-Letter, Z-Node, Z-System, Alpha and authors; dBase II, Ashton-Tate; Unix, AT&T Bell Labs; TURBO Pascal, Borland Int'l; MagicFont, CES; CP/M, CP/M Plus, DRI; Z-News, Echelon; Nevada COBOL, Ellis Computing; (continued on page 31)

WRITING ABOUT WRITING

Defining the Terms

Since I need an example of the kind of article we hope to get for the newsletter, and since I'm qualified to write on word processing (or I'd better be!), I choose to begin a column on the subject. Besides, the most common use for home computers is word processing, so a regular column on the subject is appropriate for this newsletter.

Note that this doesn't mean that no one else can write about this field. Articles on any and all subjects will be gratefully accepted. See page 5, "How to Submit Material".

The term "word processor" is almost too vague to be useful. It includes not only more specific types of software, such as editors, formatters, font managers, and office management software, but also any person who uses the software. All that the term tells you is that the software involves putting words on paper, and that it isn't primarily a data base manager, spread sheet, or programming language. I say primarily, because some word processors can do a fair job of making data-base managers, spread sheets, and programming languages unnecessary!

Let me, then, define these terms, since I'll be using them all the time in this column. These definitions are not fixed in stone, but I'll tell you explicitly if I feel one of them has

outlived its usefulness. If you notice me using one in a way that doesn't fit my definition, please let me know. Of course, you are also free to disagree with my definitions. No one appointed me the last word on word processing. As with all actual examples of a theoretical scheme of classification, you are free to group and separate the categories, and the members of each category, as seems best to you. But it's best that I define mine here and now, so that you'll know what I mean.

An editor is the simplest kind of word-processing software. By an editor, I mean software that allows you to put words in a file. Period. Printing is purely optional, and may be supported in only a rudimentary fashion. Normally, an editor has a command to send text to the printer, but little or no ability to make the printout look like anything. If you want a paragraph indented, you put spaces before the text in the file; if you want a line centered, you count the characters in the line and put enough spaces before the line so that it will print centered; and so forth. Think of an editor as the translation of a typewriter function to the computer.

A line editor shows you the file one line or a specified number of line at a time; you can't move up and down the screen, you can only give commands at the prompt the editor supplies, upon which it will do something to the lines you have specified, show them to you, and issue another prompt. Digital Research's CP/M editor ED.COM is a good example of a line editor.

A screen editor shows you the file a screen at a time, and allows you to scroll up, scroll down, move the cursor around with cursor keys, etc. Imagine WordStar without any dot commands at all and with no ability to format output to the printer. That would be a screen editor.

What do I mean by format output? Format is another much-used computer word. We speak of the format of a diskette, formatting a diskette, and now formatting output. When I say that a formatter formats output, I mean that a lot of the stuff you used to have to do on a typewriter is now done by the software. Suppose that you type the following line with your word processor:

.cHow to Raise Gerbils for Fun and Profit

Now, if issuing the command P for print produced this at your printer,

How to Raise Gerbils for Fun and Profit

then your word processor is not only an editor (you put the text into a file), but a formatter; it obeyed an instruction imbedded in the file to put the text on the paper in a place not directly corresponding to its place in the file.

A formatter, then, is software that understands commands that you can place into a file. These commands control the placement of text on the printed page, so that you don't have to put in a lot of carriage returns, line feeds, and spaces to get the text placed just so. Most

screen editors are also formatters. However, just as the editing capabilities of these word processors (there's that word again!) vary widely, so do their formatting abilities. All formatters are not created equal!

An editor and a formatter do not have to be combined in a single piece of software. It's perfectly possible, and in some environments is the normal practice, to edit a file, exit from the editor, and then format it and send it to the printer by running a formatter on it. The Z-System utility PRINT is an independent formatter with no editing capabilities at all; you type "Print myindex o8", for instance, to send a file named MYINDEX to your printer. PRINT automatically prints the file name and the page number on top of every page unless you choose command-line options that instruct it not to do so. The option chosen here, "o8", tells it to put 8 spaces before every line, simulating a left margin of 8 spaces.

Even if your word processor combines editor and formatter, you may wish to use your editor because you are used to it, putting in commands that mean nothing to it, and then using a separate formatter to print the file. There could be any number of reasons to do so, but the most likely is that the formatter has some ability that the formatter built into your word processor does not. If your word processor did not handle proportional spacing well, or had no commands to switch fonts on a laser printer, you will probably switch, sooner or later, to a formatter that does. If the formatter can read files produced by your old, familiar editor, why learn a new set of editing commands?

To define a font manager, I must first define a font. A font is a collection of characters that have the same set of characteristics, such as Upright versus Slanted, Bold or Medium or Light, Courier typeface versus Helvetian typeface versus Old English typeface versus zillions of other, Portrait or Landscape orientation on the page, a particular point size (height), a particular pitch (width), fixed or proportional spacing, a particular symbol set, etc. For an example, this newsletter is printed using a font which is in Landscape orientation (sideways on the page), Roman 8 symbol set (never mind what that means), fixed spacing, 10 characters-per-inch pitch, 12 point height, upright (not italic), medium weight, and Courier type face. Every character in this font shares all of these characteristics.

A font manager is what I call software that allows you to print text in a variety of fonts. Typically this means you have a laser printer, and the font manager allows you to imbed commands that switch between different fonts available on the laser. But there are some font managers which take advantage of the graphics capabilities of dot-matrix printers. For instance, Fancy Font and other products from SoftCraft let you print with all kinds of fonts on Epson FX-80s and compatible printers (they also have a LaserJet version).

Laser fonts may be **resident**, in which case they are built into the printer. Non-resident fonts may be on cartridges which are stuck into slots on the laser; these act like resident printers

as long as the card is in the machine. The other kind of non-resident laser font is the **soft font** which resides in the computer as a file, and is copied to the printer when needed.

If it sounds like a font manager must also be a formatter, you're very nearly right. They usually are. Since the font manager is the software that actually prints the file, it must either be a formatter, or it must work from a file that has been formatted on disk, so that only the font manager's commands are left in the file, and the text is otherwise exactly where it will be printed on each page.

Just to round out the picture, there also exist font editors and font compilers. A **font editor** is software that allows you to edit a font file and change the shape or the details of characters in the font. Since font files are not usually text, this requires special software. A good debugger like ZPATCH can be used to make spot changes in a binary font file, if you know the structure of the file precisely, but this is too error-prone for large changes.

A **font compiler** takes a text file of a specified structure, which you can create or modify with your text editor, and creates a binary font file from it. Computer EdiType Systems, for example, has a font compiler called MagicFont which compiles a text file into a Hewlett-Packard soft font. Fancy Font works with bit maps, not soft fonts, and has a font editor which will put a single character from one of their fonts into an edit file, and

vice versa. They also sell a compiler which translates their bit map fonts into HP soft fonts.

Some word processors try to do everything, and some are pretty good at it. I call a word processor **office management** software if it combines not only editor and formatter, but some of the functions of a data base, spread sheet, and programming language. WordStar is not office management software, but if you combine its own editing, formatting, and macro functions with other programs such as MailMerge, DataStar, etc., you begin to get there. Spellbinder Word Processor, from L-Tek, Inc., does a much better job as office management software. It has a complete programming language built in, and exceeds the capabilities of the suite of software just mentioned all by itself, using macros.

Well, thanks for bearing with me. Next issue I'll discuss the MagicSeries from Computer EdiType Systems. -- David A.J. McGlone

(Trademarks continued from page 24) FX-80, QX-10, Epson; LaserJet, HP; HD64180, HD64180Z, Hitachi; AT, IBM; Spellbinder, L-Tek Inc.; SELECTOR, Micro Ap; SB180, SB180FX, Micromint; WordStar, MailMerge, DataStar, Micro Pro; ON!, Oneac; BackGrounder ii, Plu*Perfect Systems; BAlias, Perset, Sortmk, Nsurvey, Skunk Creek Computing Services; Fancy Font, SoftCraft; Z80, Z180, Z280, Zilog -- and please correct me if I got any of them wrong!

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A limited supply of the original printing, in the original size, is still available at the regular back-issue price.