

ZCPR3 NEWSLETTER 007

Answers to Newsletter 004 Generated Questions: 1) Both President Larry Boucher and New Business Development Manager, Jim Kurinsky, of Adaptec, 580 Cottonwood, Milpitas, CA 95035, 408/946-8600, are happy to send you literature on their company's fast controller boards and on companies that use them. 2) Prices for hard disks were given as less than \$3000 for 10 to 40 megabyte packaged units. A 10 megabyte unit goes now for about \$900. We're presently looking for 80 megabytes for less than \$3000! The up-to-\$600 for quarter megabyte of RAM is for a plug-in board, not the price of loose chips! (Thanks to Robert Heckert, Fullerton, California, for highlighting potential misunderstanding caused by our phraseologies.)

Our position, restated, is: very useful programs need use no more than 20 or 30 kilobytes of RAM, of Transient Program Area. Using overlays and chaining permit programs of any size to run fast, very fast, if a fast, correctly installed, Winchester is used for program-module storage. Such a philosophy means that BIOS or CP/M-system size is not of much importance.

It seems there is some emotionalism involved in setting up ZCPR3 systems with, say only 48K TPA. (We always assume RAM to be full 64K-bytes.) Our experience suggests few CP/M programs need more than a 48K TPA. We have run both T/Maker and WordStar in 44K and, subjectively, can see no chance in operating speed caused by reduced buffer allocation space. Who wants to conduct measurements of time taken to scan files, run spreadsheets, etc., with various sizes of TPA? We'll report your findings here.

Additionally, someone (you) should, in our opinion, do an in-depth article comparing the **Lasting-Value Software**tm nature of ZCPR3 to PC-DOS and Unix. Any takers among you writers? We'll supply our experience, our facts to support your trade-study writings; and surely you'll have no trouble getting such an article published. Comparisons of this nature are hard to come by. We'll help, if need be!

Important 8-Bit Program: Outline processing is a mind expanding computer aid; KAMAS is just that. The acronym comes from Knowledge And Mind Amplification System, a piece of software destined to mark our 8-bit world: outline processing, wordprocessing, telecommunications, information retrieval, and a Forth-like programming language, all-in-one. The system is somewhat command-line-completion driven. Sounds like an ideal program for control by VFILER, MENU, and VMENU. ZCPR3 could make KAMAS turn-key, from a series of chained (up to 255), custom, easy-to-alter menus. For \$175.00 KAMAS sounds like something we would like to push. CP/M-80 software development is alive and well, thank you. But no thanks to many others. KAMAS is produced by Compu-sophic Systems, 2525 SW 224th Street, Aloha, OR 97006. Write, or give them (Adam Trent, President) a call at telephone 503/649-3765. (Ezra Shapiro has a four-page Preview of program in September issue of **BYTE**, starting page 123.)

Some think we don't write (and talk) enough about ZCPR3, but our attitude is: we have a super operating system and it's a tool to be used to solve every day problems. ZCPR3 provides the environment to integrate application programs that work hard, provides a user-interface adaptable (through VMENU, MENU and VFILER) to the experience level of the console operator. We speak and write of those programs and hardware ideal for the ZCPR3 environment, that provide a more-than-competitive, cost effective solution to our problems. But it seems our pronouncements cause a stirring in certain intellectual circles,

among those who know the truth of these matters, but are not following through with beliefs. They squirm and turn, sleep comes not...are we tools of commercialism and consumption? Are we part of this syndrome; a mirror is in the bathroom, but only look if you're not a ZCPR3 user.

Z3 TIPS: Take a look at what XDIR can do. It's so powerful that most of us never think of using things it can do, because we don't remember all its power. The **U** trailing option enables displaying all files in all User Areas. The ability to log disk directory files into a file and then compare other directories to that file is extremely useful and a time-saving feature for scanning lots of disks to find differences among them. The negate option permitting display of all but the listed files is novel in the CP/M world. Study of options possible and comparison table below provides information on its features. The table indicates why it is so difficult to describe with mere words all features of directory display programs provided with ZCPR3.

Command: XDIR Version 2.0

Syntax: XDIR dir:afn ooo...
or XDIR /ooo...

Function: XDIR displays a disk directory on the console or printer and is a file name scanner.

Options:

- Aa** - Indicate attributes of files to be selected
 - a=A for All Files (System and Non-System)
 - a=N for Non-System Files [default]
 - a=S for System Files
- D** - Send Output to Disk File XDIR.DIR
- Ff** - Enable a File Scanner Function
 - f=L to Log File Names to FNAMES.DIR
 - f=P to Print File Names Stored in FNAMES.DIR
 - f=S to Scan Disk and Compare to FNAMES.DIR
- I** - Inspect Logged Files (use with FL option only)
- N** - Negate Selection of Files
- Oo** - Select Output Features
 - o=A to Disable Display of File Attributes (R, S)
 - o=F to Form Feed Printer when Display Done
 - o=G to Group Files by Name and Type
 - o=H to Display Files in Horizontal Format
- P** - Send Display to Printer
- PF** - Send Display to Printer with Trailing Form Feed
- U** - Select All User Areas

A hardcopy printout (assuming you have a printer) of all characteristics and features of DIRS (as well as any other help HLP file) can be obtained using the HELPPR program. Enter:

HELPPR <helpname.HLP> <options> <cr>

Options for HELPPR are obtained by entering the customary double-slash after the command name:

HELPPR // <cr>

Not to slight other ZCPR3 directory display programs, let's compare them to XDIR using a matrix table of features and functions. Z3 DIR is the intrinsic assembled in the CP, RCP DIR is in the Resident Command Package, and DIR, XD and XDIR are transient COM programs.

Directory Display Comparison Table

<u>Attribute</u>	<u>Z3 DIR</u>	<u>RCP DIR</u>	<u>DIR</u>	<u>XD</u>	<u>XDIR</u>
Program Size	N/A	N/A	2K	4K	8K
Sort File Names	No	Yes	Yes	Yes	Yes
Select Sort Order	N/A	No	Yes	Yes	Yes
Select SYS Files	Yes	Yes	Yes	Yes	Yes
Select All Files	Yes	Yes	Yes	Yes	Yes
Negate File Select	No	No	No	No	Yes
Display Attributes	No	No	No	Yes	Yes
Horiz/Vert Format	No	No	No	Yes	Yes
Printer Output	^P	^P	No	Yes	Yes
Form Feed	No	No	No	Yes	Yes
Select All Users	No	No	No	No	Yes
Disk Output	No	No	No	No	Yes
File Scanner	No	No	No	No	Yes

And now to an equally important program: PRINT. Convenient printer formatting and extreme flexibility are main features. (PAGE, for output to console, has similar features; remember PAGE and PRINT can replace intrinsic built-ins, TYPE and LIST.)

Command: PRINT Version 2.0

Syntax: PRINT dir:afn1,dir:afn2,... o...

Function: Prints a file on the LST: device, like LIST does, but offers many more options. Prints a heading, pages file, numbers pages, numbers lines, places date/time stamp on output, puts file name on output, and more.

Options:

- E** - Exact Print (Expand Tabs, Form Feed, No Line or Page Numbers, No Heading)
- F** - Toggle default of file name display on page header (default is ON, so F turns off name display)
- H**<delim>text<delim> - Define Heading text to appear at the top of each page (delim = @, for example)
- I** - Inspect Files (user selects files before printing begins)
- L** - Enable numbering of each line
- M** - Disable Multiple Run Flag (if multiple run is ON, then no "Set Top of Form" message appears for each file and PRINT moves from one file to another unattended) default is with Multiple Run ON
- N** - Disable numbering of each page
- On** - Offset from left each line n-spaces to the right
- Sn** - Start printing on page n
- T** - Toggle date/time stamp in the header of each page (a TIME subroutine must be assembled into PRINT to enable stamp)

GLOSSARY and ZCPR3 COMMANDS reference cards, presently shipped with our software, have been sent complementary to all Echelon customers. We care about your well being and believe these two items assist every day use of ZCPR3 8-bit CP/M software, both during initial learning and for promoting fuller retention. These cards at computer-side permit quick operator assist to forgotten commands and word meanings.

Z3 Bug Report: Two more come from Peter Lyman of Pasadena, California. FINDF and UNERASE both will not do their jobs if the files searched for are the

first four in the directory on track two of the floppy disk. Also from Peter, HELP doesn't expand tabs because of direct use of BIOS calls, instead of using BDOS calls. So text HLP files using TAB for indent and big spaces don't look too good! Quick solution is to not use TAB in HELP text files, but five (or eight) spaces instead. We're looking for a satisfactory long-term solution.

Magazine Articles: Page 396 of **BYTE**, September 1984, gives a little history of ZCPR3 and points to where it's going; stated at article's end, "to be continued." **InfoWorld**, 17 September, 1984, starting page 59, carries an excellent review piece by Allen Mehr about Ampro Bookshelftm Series 100 Computers, as well as kind words describing ZCPR3 and Shell Friendlytm. The machine received highest ratings in categories Setup, Ease of Use, and, most important, Performance. (Please don't miss Echelon's full page ads in Issue #10 of **User's Guide** and October **Computer Language** magazines.)

Part One of a ZCPR3 article by Richard Conn appears as keystone piece in October **Computer Language**, November for the second part. An in-depth, independent review of ZCPR3 also appears in the November '84 issue.

The **Dr. Dobb's Journal** article on SYSLIB3 by Robert Blum appears in the November 1984 issue. That same issue of **DDJ** has an interesting write-up on about making files public (global, from any directory, access of both command and text files) using a licensed DISK7tm program for special displaying and copying of PUBLICtm files, as well as normal files. Bridger Mitchell of Flu*Perfect Systems, Box 1494, Idyllwild, CA 92349, 714/659-4432, has a thoroughly developed approach to public files under CP/M. We are considering implementing a feature like public files under ZCPR3 if we can preserve directory password security.

IBM versus AT&T: Microsoft wins over Digital Research, we must report. Xenix (Unix System 3) wins over AT&T System 5. System 3 is the standard now, and IBM has taken Unix development away from the erstwhile monopoly, bureaucracy-infested AT&T. IBM is competition-tough. The PC-AT (Advanced Technology) with Local Area Network (LAN) from Sytek, Mountain View, California, is the product big-business wants, and probably needs and deserves. (IBM has rights to purchase 5% of Sytek, which in turn is 51% owned by General Instrument!) IBM appears to not be going the time-share approach of mainframes and minis using Unix. LAN is efficient, we said this in several ways before. ESD (Entry Systems Division) wins over other divisions; Florida leads the struggle against other parts of the IBM world. AT&T should have established System 5 as the standard before it came out with computer hardware. Apple is dead in this market, good night Lisa, or is it Irene? DRI Concurrent DOS is still-born, nary a movement detected! Who needs sales to Fortune 500 companies anyway? A huge, savvy marketing staff cuts the mustard. That's our musings.

Digital Research, if any single company can be given such credit, caused the microprocessor to become popular with its virtual-machine operating system for 8-bit 8080 cpu's. But just when the going got competitive, got rough, its leadership was found wanting. New leadership of late has done no better. Johnny-come-recentlies know little of what they need to know. They miss the boat--see not the patch for the code! We sorrow, again and again. Blood comes from our pores but, as we all know, we reap what we sow; natural law cannot be circumvented.

Another IBM move having profound industry consequences is their endorsement of Graphic Systems Software, Wilsonville, Oregon, graphics operating system. This move, similar to the way IBM adopted Microsoft's MS-DOS, means good-bye GSX from DRI! Mindset Corporation, Sunnyvale, California, saw the wisdom of GSS when taking it on for their super PC clone. (But we wonder how long such clones can be around with the PC-AT priced the way it is.)

Wyse Technology, our favorite terminal manufacturer, located in San Jose, California, has done so well (last year's sales of over \$17 million) they are going public with an offering of 1.8 million shares of stock at approximately \$8.00 per share. A success in Silicon Valley, coming from customer-insight, courage and simple hard work; westcoast good news! And now for...

Bad News: Sadness darkens our faces with the knowledge that Ziff-Davis is cancelling publication of **Microsystems** magazine. We are charter subscribers, remember the first issue produced with a Diablo daisywheel. The magazine's demise signals another bow-wave in the microcomputer industry--publishing power moving from East to West. **Computer Language** and **Dr. Dobb's** more than fills the gap vacated by **Microsystems**, and **User's Guide**, so unique in our industry, continues as the journal of new computer users, and of those who desire an in-depth understanding of popular computer programs. Weekly **Info-World** completes the quadrangle with timely micro-news and product reviews. Four influential--thus powerful--journals westcoast produced! (Let's not forget both Unix magazines, **UnixWorld** and **Unix Review**, are from this same coast.)

Also, **Microcomputing** magazine is finished after much twisting and churning. **BYTE** more than covers whatever small void created by one less such publication. And furthermore, **BYTE**, seeing the handwriting on the wall, is covering CP/M-80 activity with renewed vigor. Gee, that's good news!

About two years ago we proclaimed, while many seemed not to know what we were talking about, "There's something sick with an industry that requires so much money spent in advertising products. Company managers funneling stockholder (or vc) equity capital to pay for ads before products succeed, or much less make money--such paths lead to Chapter Eleven." Comes time now to pay for short term views, for so little soul exhibited. We need more constructive ideas from people, less copy-cats. Too many clone-magazines, too few impressed and inspired readers, too many ads with mind-numbing and language-altering wordings! The industry yields to natural karmic retribution. (Maybe magazine subscription prices are too low, ad prices too high, management decisions lack insight; something certainly has been and is far less than whole.)

We presently favor four magazines and their editors:

- | | |
|--|--|
| 1. User's Guide
POB 5245
Redwood City, CA 94063 | 2. Dr. Dobb's Journal
2464 Embarcadero Way
Palo Alto, CA 94303 |
| 3. Computer Language
131 Townsend Street
San Francisco, CA 94107 | 4. BYTE
70 Main Street
Peterborough, NH 03458 |

Please support them by making known your feelings, your likes and dislikes, and subscribing. Echelon has ads in two of them now and will have in them all, if business justifies. Our attitudes could change if their editorial policies ever promote other than a healthy climate in which we can learn and in which we can grow--learning, growing, that's what we call living! See you down the lines...

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ZCPR3 NEWSLETTER 009

Z3 TIPS: CD and ST haven't been discussed much and presently appear to be little used features of ZCPR3. But that should change when we understand the environmental flexibility attained with them. CD (change directory) is used to change from one directory to another with password access security. That's useful, but another most important task it performs is automatically running ST.COM (if exists) on entering the requested directory! ST (start) is an alias file (a series of commands known by a short name) that is used to change from a previous environment to another, one more useful and efficient for present tasks. For example, ST loads new SYSn.NDR file as well as new RCP and FCP files! Then MENU may be auto-entered as we recommend doing with DISCAT and its global alias, CAT. (ST is an alias command; NDR, RCP, and FCP are system segments loaded by LDR.COM and are memory resident.) Thus the environment is tailored with those tools to perform work efficiently; we go to a different area for this reason. A little thought and planning applied to all tasks envisioned, convenient work space set-up for each--that's advanced computing! An environment is: **specifically designed work space.**

Each named directory, SYSn.NDR, (with optional password access) is created using MKDIR. ALIAS.COM is used to create custom ST.COM's. Alias ST must always have the name ST (that's the only file CD auto-runs), but NDR's may have any name as long as the type is NDR. If you are careful, all can have exact same file name, but don't copy them from directory to directory--one overwrites another! Though with same name their contents are different; they each produce change, creating desired local environment, e.g.:

```
B0:WORK>cd text:<cr>
PW? mypass<cr>
C7:TEXT> (ST has been auto-loaded)
```

As distributed, ZCPR3 permits 14 (fourteen is an odd number, but a dozen never seemed enough) named directories simultaneously in memory (though it's easy to allocate more memory buffer space if that's desired, 18 bytes per name). But by running ST a different named directory file can be loaded for each directory entered, permitting up to 448 names per (logical) drive (14 names x 32 areas). Certainly such a limit places few bounds on most planning activities and resultant environments!

We've come up with a version of ZEX not requiring assembly to install on your system. Advantage to those who don't own MAC and SID/ZSID is obvious. Hurrah! Now installation of all ZCPR3 utilities is identical using Z3INS.COM, SYS.ENV (or Z3.ENV if running Z3-Dot-Com), and ZCPR3.INS. The program object file is on ZCPR3 RCP/M as ZEX.OBJ. Rename to ZEX.COM before installing with Z3INS. (DDT-patching at standard location 10AH is single-file quick way.)

More programs on the RCP/M: Ted Emigh (Raleigh, North Carolina) developed a ZCPR3 tool called FINDERR. Warning and fatal errors from M80 assembly sets ZCPR3 registers; ZEX processing, and the like, react accordingly. Other transient (application) programs probably can use FINDERR techniques to advantage, trapping error conditions under ZCPR3. The five files of FINDERR (including upgraded M80.ZEX) are on the ZCPR3 RCP/M as FINDERR.LBR. Also LDR11 is there! It's finally fully fixed, we really believe.

Additionally, latest version of DU3 can be downloaded as DU3.OBJ. Seems some CP/M BIOS implementations didn't like the way the internal help text was being processed. Hopefully new version takes care of that problem.

ZCPR3 BBS and RCP/M Comments: David McCord has been sensational getting the ZCPR3 board up and running, and with such dispatch. (Isaac Salzman, North Hollywood, California, 213/615-6410, and his ZCPR3 RCP/M were an inspiration.) Tim Gary's METAL message system employed has many bells and whistles; truly a desirable interface that's easy to use.

When logging on for first time, record all dialog (with your modem program) so you can later study the transaction offline. Be sure to retain list of system commands and instructions going into CP/M area. And remember, after entering CP/M area, to type **PWD** (print working directories) so you see (and know) names of all available directories. Here's how you go from one to another--you name them! The command line prompt appears: **AO:COMMAND>** and you go to another disk/user area by typing desired directory name. **AO:COMMAND>ZCPR3:** takes you to the ZCPR3 directory area. It's not too much different than our homebase computer systems! You can use TCSELECT to install your terminal on the system, and then take advantage of screen-oriented utilities (HELP, etc.) found there!

Dave intends (with Tim's assistance) to collect a database of BBS users' terminals, characteristics auto-activated after initial log-on. Such a feature is a first, to our knowledge, for BBS's. ZCPR3 sets news standard!

Here's what you see if H or ? is entered while in METAL message system:

```

+-----+
|                                     |
|               * * * ZCPR3 BBS HELP * * *               |
|-----+-----+
"B"                = Display system Login bulletins (important info).
"C"or"CPM"         = To go to CP/M with extensive help shown before entering.
"E"                = Enter a new message into the message data base (prompted).
"G" or "BYE"       = Log off from the system through Metal BBS (comments req.).
"H" or "?"         = Repeat the display of this message (get help).
"K"                = Kill a message to you (only) in the data base.
"LIST"             = Inquire about a user of this system (last login date, etc.).
"O"                = Show a list of other systems near this Metal BBS.
"Q"                = Show a quick listing (by subject) of current messages.
"R"                = Retrieve a specific message by number (repeating).
"REPLY"            = Reply to a message in the data base (fills in 'to' portion).
"RP"               = Read new messages since last login, in order with prompting.
"RS"               = Read any messages in order with prompting.
"S"                = Show a listing of messages with author and date info.
"U"                = Change your password, or User parameters.
"W"                = Re-Display the system Login Welcome Message.
"X"                = Select the expert mode (short prompts) of operation.
"Y" or "CHAT"     = Call for the System Operator (6:00 p.m. to 10:00 p.m.).
"#"                = Show vital numbers like high msg., caller #, etc.
Control S or S    = Suspend output for viewing, any key to restart scrolling.
Control K or K    = Cease current command and return to command mode.

```

Commands may be separated by a space or a semicolon to have more than one command on one line. Example : R;234 would retrieve message 234.

All outputs will pause after 23 lines, type any key to continue when you see the **[more]** prompt.

Entering C or CPM at the command line takes you to the RCP/M portion of the system, where you upload and download files using Ward Christensen's XMODEM error checking and correcting transmission protocol. TERM3 has this protocol, plus...that's another story.

New-Users-of-CP/M Corner: The quickest and simplest way to get ZCPR3 up and running (next to having a CP/M Assembly Language guru living with you) is to install **Z3-DOT-COM**; installation takes four (4) minutes or less. After installing and having become somewhat familiar with the new environment, the trick setup results from putting the command **Z3** in your CP/M CCP command line buffer. (Use DDT to do this.) Then on cold-boot the machine comes up in ZCPR3 and not plain vanilla CP/M.

Here's how--**SYSGEN** your system disk outer tracks into memory (use of SYSGEN is described in CP/M documentation received with your computer), **SAVE 40 CPM.SYS <cr>**. Then **DDT CPM.SYS <cr>**, display hex and ASCII code using **D <cr>** repeatedly 'till Digital Research copyright notice shows:

```
-D<cr>      (sixteen lines of hex and ASCII appear for each D<cr> entered.)
0980 C3 5C DF C3 58 DF 7F 00 20 20 20 20 20 20 20
0990 20 20 20 20 20 20 20 20 43 4F 50 59 52 49 47 48          COPYRIGHT
09A0 54 20 28 43 29 20 31 39 37 39 2C 20 44 49 47 49      T (C) 1979, DIGI
09B0 54 41 4C 20 ..... etc.                                TAL RESEARCH ..
```

The important task is finding two "C3"s (JMP instructions) separated by two characters each, followed by "7F" and "00" in the line ahead of the DR copyright notice. (Some computers, like Morrow or Radio Shack, use location 1100H or some other address, instead of standard DR DDT image address of 986H, for command line buffer address.) Now using DDT's S (set) command, do this: (your console keyboard entries are in bold)

```
-S986<cr>
S986 7F <cr>      (carriage return retains present hex value.)
S987 00 2         (numbers of characters in cmd, <cr> after each entry;
S988 20 5A       then the command name in hex. Z3 = 5A 33.)
S989 20 33
S98A 20 0        (NULL for end of command sequence,
S98B 20 .        a period to terminate S command, then last <cr>.)
^C              (ctrl-c to exit DDT.)
```

Next, again **SAVE 40 CPM.SYS** and **SYSGEN** saved file to system tracks. You now have your "system" both on disk boot tracks and as a disk file: CPM.SYS. And more importantly you have **Z3-Dot-Com** up and running! Now you can experience the range permitted by this epic program and environmentally enhanced operating system.

If you have problems putting Z3 in your command buffer and haven't been successful after seven (7) tries, call your nearest good-neighbor helper, or call us and we'll do what we can to talk you through the operation.

Two versions of Z3-Dot-Com are available: one for Z80 machines and another for 8080/8085. The latter version is ideal for CompuPro/Zenith dual operating system computers.

Z3 Bug Report: VFILER's CMD-file menu has a problem. You can't execute #-menu commands (user numbered) from the # menu, but only from the directory-of-files display! We've located and fixed the bug (undocumented characteristic). The code change fix will be distributed within the fortnight.

Program bugs are getting few and far apart--that's been our goal from the beginning of our software design and development activities. Let us know if you find anymore of these pesky little things. We'll be using the ZCPR3 BBS to release fixed object files and occasionally source. The board is the quickest way to transmit and receive messages and programs to and from ZCPR3 users--we're a tight community on the move.

From Author of ZCPR3, Richard Conn:

WHAT MAKES A PROGRAM INTO A ZCPR3 TOOL?

There are many good programs in the public domain, and several ZCPR3 tools duplicate these programs in terms of functionality in one way or another. For example, the PD offers the directory display programs D, SD, DD, and others, while the ZCPR3 toolset offers the programs DIR, XD, and XDIR. Why duplicate the effort in the ZCPR3 toolset--why not simply use available public domain programs?

The programs in the public domain are not consistent in their syntax or method of use, by and large. I created the ZCPR3 tools to be consistent in a number of ways:

1. The public domain tools which were not associated with ZCPR3 did not know how to deal with the ZCPR3 environment. Named directories, like PASCAL:, could not be referenced, and the command search path had no meaning to them, for instance.

2. A consistent syntax was not supported. Some tools required their arguments to be prefixed by "-", others by "\$", others by nothing at all or a space, etc. All of the ZCPR3 tools prefix their arguments with a "/" if a file reference is not provided, or a space or a "/" if a file reference is provided.

3. The built-in help feature was not universally supported. Some programs told you how to use them if you typed in their name with no arguments, others did not provide any internal documentation at all, etc. I did not succeed in making all of the ZCPR3 tools consistent in this sense, but the attempt was made. Many, but not all, ZCPR3 tools contain built-in documentation which is acquired by typing tool's name followed by two slashes, like "XD //".

4. The tools didn't support lists of files as arguments when it made functional sense to. I'm really a strong advocate of this; if I want to print five files, for instance, I would rather issue one PRINT command with five files named (or one AFN and then perform an inspection) and let it go than issue one PRINT command with one file name, and then another PRINT command, etc.

I encourage everyone to enjoy their ZCPR3 system, write tools for it, and contribute them to the user community. I feel, however, that a program is not a ZCPR3 tool unless it abides by the rules specified above as much as possible (rules 3 and 4 sometimes don't apply or are simply waived). SYSLIB, Z3LIB, and VLIB all contribute toward providing the support necessary to make the job of tool consistency and adherence to these rules less of a task.

Utility Update Note from Rick: The new DPROG (Version 1.1) is significantly different from initial Phase 2 release version, thanks to one simple change. Instead of simply programming devices from a file using commands like: **DPROG ASM** to program a terminal (function keys, user message line, etc.) to support the user in Assembly Language programming, the new DPROG also allows words (defined in the indicated file) to be specified on the command line like:

DPROG EPSON ELONG FONT2

Such capability greatly extends the utility of DPROG. In the above example, DPROG will read in the file EPSON.DPG, process it (including the definition of whatever words are contained in this file, such as ELONG which commands the printer to go to elongated print and FONT2 which selects some character set/font numbered 2), and then pass over the words (or strings) specified in the command line. By writing a file which programs your printer, whether it is an EPSON, OKIDATA, TOSHIBA, etc, you can use DPROG to select printer output attributes.

Included with the new DPROG is a help file (DPROG.HLP) which documents this new feature and several sample *.DPG files. The file P1350.DPG programs my Toshiba P1350 printer and should serve as an example to users on how to set up a DPG file for their own printers.

Echelon ships DPROG, Version 1.1, as part of new Core, Utility, and Phase 2 orders. DPROG.HLP and *.DPG files are on the ZCPR3 BBS within the fortnight.

Alarm Bells Ringing...tools, program fixes and improvements to be considered for official distribution must come to Echelon first! We are configuration managers for all ZCPR3 related software. Please do not put fixes onto RCP/M's: they confuse too many users as to their status and validity.

Another ZCPR3 Utility Program: Xpert Software (8865 Polland Avenue, San Diego, CA 92123) has announced that their **XtraKey** utility is ZCPR3 compatible--most other "key" programs are not. Tom Geldner and Robert Greenlee (company co-founders) have a most economical, complete CRT console, printer function-key generator; we have not seen better. The CP/M 2.2 universal package goes for \$39.95. Now that's value. Order (Visa/Mastercard accepted) by calling them at 619/268-0112 or send check or money order plus \$3.00 shipping (California residents add 6% sales tax). We add this program to our **Lasting-Value Software** list.

Coincidentally, a ZCPR3 user has developed a function-key program running as a ZCPR3 system segment I/O (input/output) Package! We presently are reviewing this package and probably will license its use to ZCPR3 users for a small fee.

HELP us correct mistakes if you think we made some. If you placed an order for DISCAT, Phase2, etc. and think it should have arrived by now, and hasn't, let us know. These computer database systems we use for order entry and shipping are not perfect; especially not perfect are console operators keying characters into them--we admit that's our biggest problem. So if you think delivery is taking too long, write us a note stating your concern. (**ZCPR3: The Manual**, CP/M Apple][and Epson QX-10 disk formats, and TERM3 are not shipping presently, so don't write of them. Presently they receive our highest priority.)

New Disk Operating System (DOS) takes advantage of extended functions of Zilog new 2800 chip! The DOS is called **ZRDOS**, 280/800 Replacement DOS. ZRDOS mates with ZCPR3's Wheel Byte and is fully compatible with all CP/M-80 software. Dennis L. Wright, (no relation to Joseph W. Wright, but they are friends, which establishes relationship) author of this striking code, is one who loves 8-bit economy and efficiency. Since Digital Research has apparently abandoned our world (a reaction to Microsoft MS-DOS and Xenix capture of 16-bit operating system market), Echelon has decided to fill the small generally unnoticed void presently existing. (We recently received DR's utility proposal and found it non-responsive to our needs; Microsoft never took us seriously.) Therefore, we intend to market a full set of 8-bit operating system, development and support software using Echelon-sponsored ZRDOS, macro-relocating assembler with linker and librarian, translators, and debuggers.

Now we search for a competent set of programs to replace MAC, RMAC, LINK, M80 and L80...end one era, begin a new. Much creativity is coming from many small, humble companies and from clever individuals; we prepare to explore and use this creativity.

Down stream we plan to machine translate all our released programs presently using Intel mnemonics to Zilog. Public domain program **XLATE** may be able to effectively perform the job; we're looking into this program plus other translators, like **IT0Z** (Intel to Zilog) and **ZTOI** from RD Software (Founder, Robert Doolittle, Pacific Palisades, California). Furthermore, RD Software **ZDM/ZDMZ** should handle our debugger needs for Assembly Language software development work. As you see, lots of 8-bit activity...

OEM/VAR's may inexpensively obtain directly from Echelon licenses to resell complete operating and development system packages; Echelon, your single source for ZCPR3 related software. Remember, both ZCPR3 and ZRDOS are downward compatible with CP/M software. Those interested can obtain a sample agreement and more technical details by writing us (please don't telephone, thanks).

Lower-than-expected-demand for IBM PC's has created a grey/black market of discounters for the product. Such practices turn business-like blue of Big Blue into a grubby, tattered banner--one filled with short-term greed and lack of wholeness. Despite IBM's seemingly good intentions, the market they took control from pioneers is more than a mess, it's a quagmire!

Real leadership would demand an immediate stop to contractually illegal selling (dumping) by their big dealers to unlicensed houses; but, IBM's over production is so great they covet every potential avenue for buyers, no matter the status or money willing to be paid. Of course, the PC-AT has a lot to do with present low demand for the vanilla PC's and XT's. Contrast this market flux with record October 1984 sales by Ampro Computers, Inc. of Mountain View, California.

As an aside, most popular mainframe IBM 4381 computer memory, using their 256k-bit chips, sells for (get this) \$10,000 per megabyte--that's economy? We guess \$9,000 is for service-after-sales, \$1,000 for hardware...there is no free lunch!

Long live 8-bit machines...

What is Echelon's Business? Microcomputer pioneer, George Morrow, recently asked a similar question about his company: Morrow Designs, Inc. Well, EI is in the business of learning, becoming more conscience of ourselves and our environment (no pun intended). We experience rewards from study, work, play--mentally, to us, all the same. From these experiences, occasionally we try to communicate knowledge, those things found valuable, hopefully, to all of us. But recently we've come to realize that knowledge (especially its cousin, understanding) cannot be transmitted, but data and information can. So we do that instead. These latter act as catalyst to those former, moving from level to level, a swirl of intermingling, dynamic energy. We first give with little concern for what is to be received--but lo, we receive seven-fold. Reception occurs at several levels simultaneously, mental, intellectual, material, emotional...

The national economy and our industry appear reacting to an earlier-caught dose of malaria, which has become chronic, giving us recurring bouts of chills and fever--booms and busts--recession and inflation. Base our business on satisfying sound needs of human nature and our business is sustained. We try to do this.

Send your thoughts concerning these matters; we'd like to know them. Without you, our customers, we learn painfully slow!

Fragment of Letter recently received from Edgar Allen Poe: The grave is not all that bad! Three square meals a day, clean linens...no nightly yakking black birds or daily hassles from Federal IRS...

Artificial Intelligence (AI) Research: directed efforts supposedly to make life easier. The 19-company AI grouping (Microelectronics & Computer Technology Corp. in Austin, Texas) is an example of what's lacking in humanity--a mass of indirection, no willfulness, no leadership! How can we discuss such a subject (AI being one never defined, except by egotism of highest order) without knowing what intelligence is, much less its bogus aspects: the artificial!

The Japanese noble-challenge to US technology leadership requires our ascending effort, not descending; certainly not degenerate as it now appears.

Easy comes by opening our consciousness, never by masking off reality. Remember we are biological life and we live, or at least we should. Who claims to be a Zombie? Who set making life **easy** a goal? Madison Avenue, those not knowing what good-life is about and seemingly trying to make sure we don't find it for ourselves? Always leading us to mindless consumption.

See you down the lines...

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Trademarks: CP/M, Digital Research; Z3-Dot-Com, Alpha Systems; Bookshelf, Ampro Computers; Z80, Zilog; Unix, AT&T Bell Laboratories; ZCPR3, Syslib3, Term3, Richard L. Conn; Discat, Lasting-Value Software, Disk7, Echelon; PC-DOS, IBM, Int'l Business Machines; MS-DOS, Xenix, Microsoft; WY-50, Wyseword, Wyse Technology; ZRDOS, Dennis L. Wright; Metal, Delphi Data Systems; XtraKey, Xpert Systems; ITOZ/ZTOI, ZDM/ZDMZ, RD Software.

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Z TIPS: From ZRDOS author, Dennis Wright (Joseph Wright wrote ZRDINS semi-auto installation program): "Several apparent problems and questions regarding ZRDOS Version 1.0 have come up. I hope the following information will help to clarify these questions.

"It has been found that at least one system (CCS 300, 400) uses part (the last 16 bytes) of the BDOS image area in the SYSGEN image for cold boot configuration information. Installation of ZRDOS overlays this area. The solution is to first install ZRDOS into the sysgen image and then reinstall the BIOS hex file. This will cause no problem for ZRDOS as the last 48 bytes of the image is stack area. The CCS system uses the information contained there to configure the system during cold boot. Once the cold boot occurs this information is no longer needed and will be overlaid by ZRDOS.

"The ZRDOS installation instructions contain an example SYSGEN image installation based on a standard CP/M SYSGEN image (ORG 980H). Some systems use a different image base address. So be sure to calculate the correct offset when installing the ZRDOS.BIN file.

"ZRDOS is the replacement for a standard CP/M 2.2 BDOS. Non-standard BDOS implementations are not [and cannot be] supported.

"Some public domain utilities have been found to function incorrectly under ZRDOS. In all cases reported so far the utilities were using undocumented internal features of CP/M 2.2 BDOS. ZRDOS supports only the Digital Research documented features. The utilities reported so far are ARCHIVE.COM by Kelly Smith which requires a patch to BDOS, and SDIR.COM which modifies BDOS error vectors. ARCHIVE is not needed under ZRDOS; AC.COM [called COPY.COM in the early issues] does the same job. SDIR should be modified to use the ZRDOS set and reset cold boot trap functions (Functions 50 and 52) that are provided to handle these needs. [Joseph Wright updated Super Directory (SD97): it works with ZRDOS; it's been distributed to BBS network.]"

Jay Sage (Newton Centre, Massachusetts) has corrected ERROR1/2 to run under ZEX command-failure conditions. He also made the single-command error display more meaningful. At same time he worked over DU3. His updates are in file Z3SAGE.LBR. This file plus ZRDOS HLP and six utility files are presently on our Z-Nodes. (ZRDOS utilities only run if you're using ZRDOS.) Incidentally, Jay is becoming, along with Al Hawley, full Z-Node. You Boston locals try Jay's system at 617/965-7259; Los Angeles folks try Al's at 213/670-9465. (Many more Sysops are signing up to become Z-Nodes. Their access numbers will be given as the relationships firm.)

While Zilog moves slowly to production with advanced Z800 8-bit chip, Hitachi America (2210 O'Toole Avenue, San Jose, CA 95131, telephone 408/942-1500) announces volume March 1985 shipments of their new HD64180 (sampled last year as piece-part HD62801). We are investigating its instruction set and other features: 512k-byte RAM control, dual UART, CTC, and DMA controller, plus 8-bit multiply and block memory move, on chip. Additionally, a two-way clocked high speed serial port (CSI/O) provided makes for interesting Local Area Networking (LAN) possibilities, direct 400k-baud communications at 8 MHz clock rate. (We presently finish our Z port to it, should be complete when you read this newsletter!)

Specifications point to not one, but two super 8-biters being available to run Z-based software! (Though these newer chips run 8080/Z80 instruction sets, and even more, neither is physically pin-for-pin compatible with older chips—you can't simply unplug one and replace with other. Printed circuit board redesign is necessary.)

Hitachi's HD64180 is 80186 of eight-bit world, as Z800 is the 80286 (chip used by IBM AT). Tony Moroyan (Strategic Marketing Manager, Hitachi) said, "Many would prefer better performance in eight-bit, and compatibility to present software." His colleague, Sarv Thakur (Microprocessor Group Marketing Manager), indicated present

high 8-bit demand by stating, "We expect this market to remain for many years to come." Remember, Echelon is here now with advanced Z Operating System (ZCPR3 combined with ZRDOS3) ready to support high-technology microprocessor architecture.

These new high-integration chips are superior in many ways to their 16/32-bit counterparts, and can be used without sacrificing incredibly large base of existing 8080/Z80 software and programming know-how! The Z800, because of high clock rate capability and superior design, should run circles around Intel 80286. This notwithstanding, Hitachi's chip sets a standard for cost effective, high performance computer designs. Here are bench marks running **BYTE** Magazine "Sieve" under MBasic (HD64180 clock at 6.144 MHz and one wait state; other computers, as delivered):

Apple IIe	—	2806 seconds	(6502)
TRS-80/II	—	2250 "	(Z80)
IBM PC	—	1950 "	(8088)
Unannounced Computer	—	1322 "	(HD64180)
Apple Macintosh	—	1214 "	(68010)

Over twice as fast as Apple II, nearly as fast as Macintosh (32-bit?), and much faster than IBM PC (16-bit?)! The production HD64180 units are said to run at 10 MHz clock speed increasing above performance by more than 50% to 806 seconds, leaving Macintosh in road dust! Just guessing, IBM AT likely does Sieve in 600 or so seconds. We understand Hitachi is offering a companion, high thru-put graphics processor: 2 mega-pixels per second, both for full-color and monochrome. Now that's more than state-of-the-art (NEC eat your heart out)! S-100 and single-board computer manufacturers, which of you are first with a board using one of these great new chips?

Eight-bit microprocessors continue to be designed into new systems, and in accelerating amounts, with little notice from popular press. We predict such systems will be around as long as they serve well so many applications—they provide unusually high overall performance because it's so easy to stay with Assembly Language, instead of having to move to inefficient high-level languages. (Something is never received for nothing...learn a little each day and reduce a little anxiety and frustration.) Using Richard Conn's **Syslib3** for standard subroutine functions makes program writing efficient and fast, both in-doing and in-results.

It's now so clear that IBM's selection of pseudo 16-bit Intel 8088 for their PC has distorted normal development progress of microcomputers. What a waste! We also sense a small backlash from deception and lack of editorial leadership of popular press. Who likes to feel duped! But who takes blame for poor leadership? Leader or followers? Let us (and them) know your feelings. What you do is infinitesimal, but it's infinitely important that you do it!

Z-Toolstm are shipping! Some highlights of Z80 **ZDM/ZDMZ** debuggers: twenty-one (21) commands versus DDT's 12. One of these commands (B) permit string searches (in both hex and ASCII) over a specific memory block range. Others enable monitor and complete debugger, patcher operations. Command line prompts ease operator mental overhead.

ZDM P (print) command is toggle expecting no trailing arguments. The effect is to send all output to printer as well as to console. It is turned off by a subsequent P command. Whenever P toggle is on, a 'P' will be displayed as part of X (examine and alter current cpu state) or T (trace) display. Jump (J) command is also toggle without arguments. It only affects subsequent T or U (untrace) commands. If J has been executed then T command displays only conditional and unconditional CALLS, JUMPS, RETURNS, RESTARTS, PCHL (IX or IY) and relative JUMPS. The Tn form of trace is usually used where n represents actual number of instructions to be traced. Whenever the J toggle is on, a 'J' will be displayed as part of the X or T display. QI and QO permit input and output of byte value to selected I/O port while DI and EI permit interrupt disable and enable.

Any ZDM command may be cancelled by pressing the rubout (DEL) key. Works with

both extended Intel and Zilog mnemonics. ZDM, a super-value tool for \$50.00 plus S&H.

REVAS3: superb documentation is monument to understanding Assembly Language and disassembly of object code to source listing. Enough here for everyone to learn something from, enough for you advanced hackers and program designers. Major features include interactively assisting you analyze your software for modification, disassembling files as large as 64k-bytes, assigning real labels to subroutines, inserting comments to disassembled code, and generation of cross reference listings. A tool of great prize at \$90.00 plus S&H!

IT0Z-ZTOI-TTOI-ITOT: these four (4) Zilog/Intel/TDL (Xitan) mnemonic and pseudo-op code translators make source code conversions so easy compared to hand translating with a text or program editor—night versus day. A tool-value similar to ones above: \$51.00 plus normal S&H.

(Z-News next highlights our Cadillactm, DSD, Dynamic Screen Debugger selling for \$195.00 plus S&H. Also keystone of our software development system, versatile and fast Zas, with Zlink, is featured.)

Shipping dates for Echelon items not presently shipping (all calendar '85):

Zas with Zlink — 18 February
 DSD — 25 February
 ZRDOS2 (and Z-Com2) — 28 February
ZCPR3: The Manual — March
 Term3 — second-quarter
ZCPR3: The Libraries — second-quarter
 ZRDOS3 — third-quarter
 Emsg — third or fourth-quarter
MM (MaintMan) — not scheduled yet

Please stay (and learn) with us—we move as fast as a shoe-string permits; eagles wish such speed!

Amateur Computerist Corner: The joy of learning is enhanced when using Z-System—everywhere you turn is another surprise; another useful, but until the moment, unknown welcomed feature! You go for months like this, thinking each new discovery is the last; but surprise, it seems to never stop...beat goes on!

Alternate telephone services seem to be giving lots of us trouble when attempting to access Z-Nodes and other BBS's. Apparently the signal level is too low to permit carrier detection circuits to work correctly. Under conditions where you get an indication of connection followed by immediate lost of remote carrier, try the conventional, high-priced long-distance telephone service: AT&T! No entity (search the Cosmos, if you will) provides quality telephone service like erstwhile Ma-Bell.

AT&T profits not too bad! Divestiture company earned \$1.4 billion last fiscal year (ending 31 December 1984), versus projected \$2.1, on sales of \$33 billion. For a company having \$40 billion assets, return on investment should be much better, but could be worse. Present calendar year should see battle lines fully drawn between them and IBM. (AT&T's personal computer is said to be twice as fast as IBM's; that makes it as quick as our S-100 4mHz Z80 systems.) What will the future hold? Lo! Behold! the future is now!

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Z-NEWS 106

Z TIPS: VMENU, a powerful shell under Z, has features somewhat different, and perhaps at times more useful, than MENU. Significant differences between these two and another Z shell, VFILER, indicate blending all three as most useful:

<u>Feature</u>	<u>VMENU</u>	<u>MENU</u>	<u>VFILER</u>
1. Show directory of files along with menu	yes	no	yes
2. Optionally lock user into menu system	yes	yes	no
3. Show macro commands to be executed	no	yes	no
4. Use macro commands from single keystrokes shown on menu	yes	yes	yes
5. Programmer speed mode (no menu shown)	no	yes	yes
6. Operate on file currently pointed to	yes	no	yes
7. Either page-out or scroll menus	no	yes	no
8. User-generated menu syntax checker for quick debugging	yes	yes	no
9. General disk system house- keeping	good	fair	best

An argument for universal use can be made for these Z shells. Your directory system could contain each, in turn, depending upon dominant task for a particular directory environment. Environment is created by ST (alias-script containing segments and commands) being loaded automatically by CD, used to exit previous environment and arrive at present.

A fully secure system (one requiring password access to directories and protected ERA, REN, etc. utilities) could use MENU as main user-interface driver; other two, VMENU and VFILER, used to speed general computer activities: word processing, spreadsheet, telecommunications, database management, accounting, programming—you name it. Secure systems are ideal in office (and home child-occupied) areas where many people have access to unattended machines.

Some Z users have not realized that Richard Conn has greatly extended our library functions by adding **Vlib** and **Zlib** to complement **Syslib3**. Six-disk package, with full source code for each subroutine, sells for only \$45.00: our free-will donation to structured Assembly Language advancements. Package is Item 27 on EI new price sheet effective 28 February. Syslib3 (Item 26) alone, still only \$29.00 on 4 disks!

Z-Toolstm Featured: **Zas**, Z80 macro relocating assembler with **Zlink**, **Zlib**, **Zcon**, and **Zref**, does it all. Well, not all but nearly! Center-piece of our tool collection, **Zas** forms basis for structured, maintainable Assembly Language program generation. Use **Syslib3**, **Vlib** and **Zlib** as source for hundreds of linkable, efficient and proven sub-routines. We combined popular features to make Assembly Language program writing easier. A macro expanding assembler using Intel, Zilog, DRI, TDL, and Microsoft syntax, mnemonics, and pseudo-ops creating at command-line option either Digital Research HEX or Microsoft REL object code. HEX files are converted to executable files with **Mload** or with **DRI Load**; REL files are linked with modular library sub-routines and loaded with Echelon **Zlink**, **DRI Link** or Microsoft **L80 (Link-80)**. Standard DRI sorted symbol table is optionally produced for use by EI **DSD** and **DRI SID** and **ZSID** debuggers. **Zas** works faster than conventional assemblers, as does **Zlink**.

Zas comes with a librarian, Zlib, to build and manage linkable REL libraries, and Zcon. The latter converts extended Intel (TDL) mnemonics to Zilog. Symbol and label table cross referenced, with statistics, to source line numbers is produced by Zref. Additionally, many TDL pseudo-ops are also correctly converted, translated. (Zas is Item 10 on our price sheet: \$95.00, complete.)

We can now all convert our 8080 coded programs to Z80 and assemble them with Zas! Bravo! Patrick O'Connell, our faith in you has been fully justified! (Being not a perfect world, we're sure minor changes to some programs will be required because of syntax inequalities. So be it!)

DSD, Dynamic Screen Debugger, provides features previously not seen on micro-computers. Version we ship works with both extended Intel (set produced using DRI Z80.LIB and MAC, essentially TDL) and Zilog mnemonics. DSD uses ZCPR3 environmental descriptor for automatic program installation, as other Z utilities are installed with Z3INS and your SYS.ENV (or Z3.ENV if using Z3-Dot-Com) file.

DSD Software In-Circuit-Emulator provides many expensive hardware I.C.E features but it doesn't require attaching any wires. Single step and breakpoint in ROM, write protect RAM, set code execute only, protect the stack from overflowing, catch illegal instructions and watch memory locations and cpu registers. The emulator can breakpoint on arbitrary conditions or identify when a LDIR instruction is going to write over protected locations before writing occurs! Not even hardware I.C.E. can provide such capability.

Full support provided for symbol files as generated by Zas, Mac, Rmac, M80 (Macro-80), and other popular language translators—complete symbolic, full-screen editor debugging! DSD runs on 8080, 8085, NSC800 and Z80 computers—soon will take full advantage of Hitachi HD64180, and when-available Zilog Z800, super 8-bit micro-processors.

Other DSD features include: online help, save memory into a file, single step over subroutines, string searching, port I/O, viewing files. And it only takes 16k-bytes of memory! (You C-Language programmers eat-your-hearts-out.) It's Item 25 on our current price list.

By the way, each EI software line **Item** retains its number as price lists are updated, acting as excellent double-check when orders are received. If we need numbers for more than 99 items, heaven forbid, we'll use over-100 number categories.

FLASH! Richard Conn featured as speaker at upcoming Trenton, NJ Faire, 20-217 April! Rick speaks on software development system environments: ZCPR3 (Z), Unix and Ada.

New Computer Magazine Appearing: Sol Libes produces an every-other-month magazine called **Micro/Systems Journal**, first issue is dated March/April 1985! Dave Hardy has joined him but continues his column with **Micro Cornucopia**. Randy Reitz has written a review of ZCPR3 features and we should see it in Sol's May/June issue. (Mail M/SJ subscription orders to Box 1192, Mountainside, NJ 07092; \$18.00 per year, six issues; \$32.00 for two years.) Wonder where Chris Terry, erstwhile writer, as are above, of defunct Ziff-David Microsystems magazine, will show up next.

About EI Manuals: Echelon documentation is intended to be placed in 3-ring, loose-leaf, binders (ZCPR3: **The Manual** is exception). We don't already supply such holders because of shipping weight and bulk. Good quality binders are so dense, postage would exceed their down-at-your-local-stationery-store price. On the other hand, many have asked us to produce a special binder with "Z" printed on its front along with program- and tool name page dividers—we may do this, if we can get a wholesale deal that's attractive to you, our customers.

Standard size, 8 1/2" by 11", loose-leaf folders are most efficient, best for reading, studying, learning from. IBM-standard (5 1/2" by 8 1/2") are simply too small (a backward way to do things); and holders of these little folders make access from desk-top a two-handed procedure. Only one hand is needed with conventional,

large, without-being-in-a-box, loose-leaf binders. But, Oh! how the herd has gotten into line: each one following the other, waiting for a turn to sip nourishment from a much-used trough.

Z-News Numbering System consists of trailing three digits; first digit representing Volume number and last, the Issue. Middle digit is inert and used only because file is sent "squeezed" to various message systems in middle-digit-always-Q form. So this Z-News 106 (1Q6) is Volume 1, Issue Number 6. (We started with Volume 0; zero is a useful number sometimes, isn't it?) Each Volume consists of nine (9) Issues, decimal modulo before cycle is repeated, except there's never an Issue 0. We felt no necessity to key issues to earthly months since it's published fortnightly. When we've published 90 issues, we'll change the numbering system (we may go to hexadecimal--no, just kidding). Some of you asked about numbering; you now have our considered answer.

An ancient once said, "A picture is worth a thousand words." Icons special are pictures, two-dimensional symbols, presently in vogue. Icons permit humans and computers to communicate. Long, long time ago, we used hieroglyphs and then cuneiform to communicate among ourselves, we early homo sapiens. Then after struggle, an alphabet developed. Now we go back to pictures, icons. How many glyphs can we remember; 50, 100, 5,000! Echelon predicts English words and phrases will be found best interface between humans and machines. We recognize symbols as powerful, but we still must learn what each symbol stands for! Icons presently are produced using common, everyday symbols easily associated with common computer functions. But day draws near when the number of functions gets so large, new non-everyday symbols have to be created--a whole new language learning would then be necessary--which is something we don't think appropriate! It's up to us to generate phrases that permit quick learning, association with that known, to what is momentarily desired.

Computing machines using icons, Star, Lisa, Macintosh (name of a rain coat, not a variety of apple, providing insight to mentality of founders of a certain company) are so easy to learn--pray tell, but what have you learned? Such machines are fading even now. Touch screens, dead (sorry HP); mouse pointers (and track balls, joy sticks digitizing pads), have a place if heavy graphics are necessary; high-resolution light pens (painter's brush) could be next big fade. No universal solution to user/machine communications is possible; each of us have our needs of the moment. Remember, we can't even reliably talk to opposite gender (sex), how our computing machines!

Four-year programmers wish only command-line completion features; one-week interested users, Macintosh's; two months, IBM PC's; ten year, protect your you-know-what big-company managers, IBM PC, XT and AT's. As we see more, as we learn more, our needs move from plateau to plateau. "There's no free lunch!" It's only through work (intentional doing, conscious thought--not mindless, repetitive action) that our being is altered to see, to know more of what's going on. Get knowledge, get a friend or two (compadres, we call them here on the west coast), get money (and power over others); but whatever is done, get understanding, get wisdom!

Appreciate, accept, our Universe is about releasing energy from matter--you are its center (did you think it was about matter being created from energy, you silly savage). Let no one push you aside! Ask questions--answers are not too important, asking questions is! From your questioning develop your own answers; become a sphere of power--a sphere of action, not reaction!

See you down the lines...

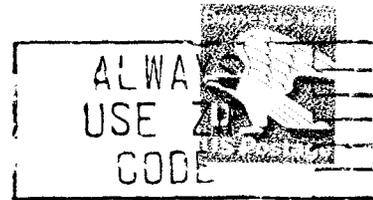
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Z-NEWS 107

Z TIPS: POKE&G01.DOC, presently on Z-Nodes, exhibits unusually high creativity by its author, Bruce Morgen (Ivyland, Pennsylvania). The Alias and Zex files described by this DOC file indicates what can be done using vast power designed into Z System (neither CP/M nor MS-DOS have such power.) A little thought goes a long way if concentrated to come up with something useful. Idea here is to change to-be-run program where and after it's been loaded. Various temporary versions are created, e.g., of WordStar with different default settings, by an RCP (Resident Command Package) poking specific addresses using different Alias files and a Zex file. Here's how Bruce described his inspiration:

"If your ZCPR3 system supports the GO command and you have an RCP with the POKE command, you can easily make extensive run-time modifications to a program. The terminal session below is a very simple example of the technique. The entire process is an alias script, ZEX is used to load and exit WordStar, the WordStar addresses for right margin and initial mode are poked to the desired values and the now-modified WordStar is run with an optional command tail. The regular RCP (without POKE) is loaded on exit. Much more extensive changes could be made this way, including some, like page length or different control strings for different printers, which cannot be done from the console once inside WordStar. You can use WINSTALL to make a modified copy of WordStar, use DIFF or equivalent to find the poke locations and off you go— 2k-bytes for the alias (1k-bytes if you have CMDRUN and put it in COMMAND.LBR), 2k-bytes for WS35.ZEX—a savings of 14k-bytes over separate versions of WordStar. Additional aliases 'cost' only 1 to 2k-bytes extra per WordStar version because only one ZEX file is needed. If you don't have ZCPR3 I/O redirection, you can manipulate the IOBYTE with a poke, not to mention the ZCPR3 external Path and Wheel Byte, much faster than with utilities (PATH or WHEEL)—clumsy technique for console input, but fine for alias-controlled routines. Similar stuff can be done from a menu shell in lieu of an alias. All this assumes that WordStar is patched, or BDOS modified, so that WordStar can find its overlays properly if you want freedom to wander around user areas. Have fun—Bruce Morgen."

A0:SYSTEM>ALIAS WSD

ALIAS, Version 1.1

Alias Name: WSD

Old Alias Command Line:

- 1 -> A0;; ;GO TO SYSTEM DIRECTORY
- 2 -> LDR SYS3.RCP; ;LOAD RCP THAT HAS THE POKE COMMAND
- 3 -> ZEX WS35; ;LOAD WORDSTAR & EXIT (SEE WS35.ZEX, BELOW)
- 4 -> POKE 036B 22; ;SET RIGHT MARGIN TO 35 (ACTUALLY 34 DECIMAL)
- 5 -> POKE 0378 00; ;SET INITIAL MODE TO DOCUMENT FROM NON-DOCUMENT
- 6 -> \$D\$U;; ;RESTORE ORIGINAL DIRECTORY
- 7 -> GO \$1; ;RUN LOADED WORDSTAR WITH OPTIONAL FILENAME
- 8 -> A0;; ;BACK TO SYSTEM DIRECTORY ON EXIT
- 9 -> LDR SYS.RCP; ;LOAD REGULAR RCP
- 10 -> \$D\$U: ;EXIT TO ORIGINAL DIRECTORY

Input Alias (RETURN to Abort)

->

WSD alias listing cancelled by entering a carriage (cursor) return. The contents of ZEX file used by WSD is shown by using the Type command:

AO:SYSTEM>TYPE WS35.ZEX

```

WS          |RUN WORDSTAR
~.         |MAKE SURE ZEX LEAVES NO
^#         |FOOTPRINTS (FOR NEATNESS' SAKE)
X          |EXIT TO ALIAS STEP #4

```

Either WSFIX.ASM or WSPAT-DM.ASM, on Z-Nodes, permit patching WordStar for use in directories other than in User area where WS.COM and overlay files are.

Another idea: set-up alias with loop-ZEX (GOTO) using REG command to "print a text file the number of times from-command-line declaration."

Chuck McManis, Sunnyvale, California, has contributed a neat improvement to IF.COM permitting wildcard file matches, and he added extensive built-in help. Chuck also has some interesting nested alias examples to wet your appetite for setting up and maintaining a ZCPR3 Source Code Library of squeezed files. Alias GET and PUT uses alias EXTRACT and INSERT, respectively. Get IF12.DOC and IF12.MAC for further details.

Finally, good neighbor-helper John Dunsmuir, Scarborough, Ontario, has located and fixed a known bug in VFILER32, in the View command. It's fixed as Version 3.3. John is presently completing addition of wild-card file tagging and unsqueezing to program, to be Version 3.4. To most, these are welcomed. Look for it as you read this newsletter. (Others, namely Jay Sage, Z-Node Sysop, and Bob Demron, have greatly enhanced VFILER in parallel with John's effort; our task of combining all these improvements into one Version 3.5 is challenging. We may choose to have two different versions, each following independent paths; more about VFILER in a fortnight.)

FLASH: Famous message handling program added to EI product line—METAL! Written by Tim Gary (Los Altos, California) Metal provides lots of capability with convenience, over 20 commands. Open and private message storage; easy and quick access to new messages not previously read; catalog of users by name, city and ID number; plus full statistics of file up/download by date and user. Metal presently mates with public domain telephone answerer, BYE, and soon with yet-to-be-shipped (vaporware) Term3. More details of METAL is found on page 2 of Newsletter 009, dated 12 November 1984.

Z-Nodes online (or soon to be) include some big storage disks and high population locations; but most importantly, these Sysops want to serve users:

1. Dave McCord - Fremont, CA - 415/489-9005
2. Al Hawley - Los Angeles, CA - 213/670-9465
3. Jay Sage - Newton Centre (Boston), MA - 617/965-7259
4. Don Buzzingham - College Station, TX - 409/845-8931
5. Ronnie Stone - Lisle (Chicago), IL
6. Andrew Hart - Palo Alto, CA
7. Tim Linehan - Olympia, WA - 206/357-7400
8. Thomas Hill - Anchorage, AK
9. Larry Snyder - Winter Park (Orlando), FL - 305/677-8086
10. Rea Williams - Carson, CA - 714/855-0672
11. Mike Ward - Voorhees, NJ - 609/428-8864
12. Norm Gregory - Seattle, WA - 206/325-1325
13. Walt Jung - Baltimore, MD - 301/661-2175
14. Rich Rodeheaver - Reynoldsburg (Columbus), OH - 614/864-2673
15. Richard Jacobson - Chicago, IL - 312/649-1730
16. Jud Newell - Toronto, Ontario - 416/232-0442, 232-0269
17. Robert Tate - Altamonte Springs, FL - 305/831-6049
18. John Rovner - Union City, CA - 415/489-0388

Certainly we find our node collection gratifying--future holds much excitement from nets and nodes for us, for our continent, and our Earth. We need total of 40 Sysops worldwide for an effective network, have a ways to go.

Dave McCord has been selected as Z-Node coordinator, with Al Hawley as backup and Los Angeles connection to Bob Finch, our ham radio packet network expert. These gentlemen are prepared to answer your questions about communications and about message systems.

Z-Nodes contain full message recording subsystems, ZCPR3 Core and Utilities files available for transfer using Christensen (XMODEM) protocol; plus latest Z-System program bug fixes and selected Echelon promotional material, list prices, and order forms. Some Sysops have elected to be downloaders of our proprietary software. For those wishing to buy Echelon programs (Discat, Z3-Dot-Com, ZRDOS, Z-Com, Z-Tools, etc.) by downloading, contact closest Z-Node for procedural details. (Downloading from nodes solves our massive disk format problem.)

More Benchmarks: Comparing 16-bit multiply and 32-bit result from Intel document "iAPX 88 versus Zilog Z80 Benchmark Report--August 1980" with Hitachi HD64180 similar operation indicates modern, superior 8-bit design. Results:

8088 (5 mHz - 0 wait states)	= 40.8 microseconds
Z80B (6 mHz - 1 wait state)	= 302.0 "
HD64180 (6.114 mHz - 1 wait state)	= 37.11 "

Z80 is slow because it lacks hardware on-chip multiply. For tests, HD64180 used software routine to provide 16-bit multiply, but employed its internal 8-bit multiply instruction to get such quick results. The different clock rates and wait states of 8088 and HD64180 muddy final conclusions about absolute quickness, but here we see 8-bit certainly holding its own! Bench testing was performed by Tom Cantrell of Microfuture, Fremont, California.

Thanks to Don Roth and Keith Houser of CP/M SIG Inc. (Broomfield-Denver, Colorado) for their considerable article writing, conducting of workshops, and generally promoting Echelon and ZCPR3. These educators are doing one Z of a job acting as catalyst to those wanting to learn.

Solutions versus Features: From our beginning we have tried to indicate, to point to solutions to your problems. We could have just listed features of ZCPR3 and ZRDOS, Z System; no, we have produced a continuous stream of examples to show solutions to your problems. Some we have received from you: thanks! What other solutions have you come up with--don't be bashful or delay, tell us!

Many have asked why we buck trends, go not with IBM and PC-DOS and Unix, the popular microcomputer fashion. Well, we are not of mass movements, but about fragments, remnants! Nonetheless we use only whole cloth, usually in dreadfully short supply; most don't understand or appreciate what we do, but how they get upset.

We welcome Crusader, activist label placed on us by some few (others have used less flattering expressions). You know, we don't go with flows, with crowds; but create intellectual turbulence and mental eddies. We maneuver at near-virgin fringes of human emotional exploration. Join us!

See you down the lines...

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Trademarks: Z80/800, Zilog; HD64180, Hitachi; 8088, Intel; Z-System, Z-Tools, ZCPR3, ZRDOS, Z-Com, Z3-Dot-Com, Discat, Syslib3, Term3, Zas, Zlink, DSD, ZDM, ITOZ, Revas3, Metal, Lasting-Value Software, Echelon and their respective owners and authors; PC-DOS, IBM Corp.; CP/M, Digital Research; WordStar, MicroPro Int'l; Unix, AT&T.

Z sets you FREE!

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Z TIPS: Robert Doolittle, author of ZDM/ZDMZ and ITOZ and is Z-Team Member (Pacific Palisades, California), shows way to reduce BIOS size by over 100 bytes. Always, we suggested full environment descriptor storage be included in your BIOS implementation. No, only a pointer to the descriptor need be implemented! Bob has rightly pointed out that Newsletter 003, page 3, listing of buffer space can be changed to indicate two address pointers, and not include 128-byte environment data. He reduced existing 14 lines to only 7 and completely removed subroutine DEFENV code:

```

: IF Z3ENV NE 0
: IF INITENV
: LXI D,DEFENV
: LXI H,Z3ENV
: MVI B,128
: CALL MOVLOP
from: : MVI B,32
: CALL ZEROM
: ELSE
: LXI H,Z3ENV
: MVI B,128+32
: CALL ZEROM
: ENDF
: ENDF

: IF Z3ENV NE 0
: LXI H,Z3ENV
: MVI B,128+32
: CALL ZEROM
: LXI H,Z3CL
: SHLD Z3ENV+24
: ENDF
to:

```

Z3 command line buffer pointer is stored 24 bytes higher than Z3ENV base address. The first command executed after cold boot should be LDR SYS.ENV—either manually or by STARTUP alias—followed by others necessary to set up computer system for desired initial environment.

VFILER Update: Jay Sage and Al Dunsmuir independently upgraded Vfiler into version 3.3; yes, two of them! Pandora's Box was nearly opened—thankfully not, though we are certain Pandora had a nice box, among other things--by allowing more than one programmer to work on a program in parallel. Al has volunteered to incorporate Jay's changes into version 3.5. Oh! we forget to tell of Al's version 3.4--it's fantastic--presently on Z-Node Central. Features added from 3.2, last version with released source, include wild card tag/untag commands; unsqueeze files, individually sending to file or by group command; viewing and printing squeezed files, without unsqueezing; view command last screen bug fixed; and many suave program improvements.

Jay's 3.3 extends screen highlighting, permits file-mask when changing directories, and most importantly, is nearly twice as quick when it loads. Last item is accomplished by technique of loading a shell, which Vfiler is, only once. If nothing else, Al must include this feature in 3.5.

New Policy: Files for enhancement or bug fixing must be "checked out" before changes can be considered for acceptance and distribution. We will allow only one person to be working on a program at any one time. The effort required to merge two versions of same program is significant, as Al will find out in combining two 3.3's and 3.4 into 3.5. We can't do the work ourselves: too extensive for our limited resources!

A procedure is being prepared and should be up on Z-Node Central as you read this. Simply stated: you check out file you wish to work on; while you have it, no one else is permitted to update it. A log will be kept to show which files are out and ones available for updating. List consists of about seventy (70) source and twenty (20) support help files. Obtain "checking out and returning file" procedure from Z-Nodes. File check out must occur from Z-Node Central!

PKeytm is super keyboard enhancer and is shipped with source code! You edit source for your cpu and terminal speed and maximum number of keys and their lengths, assemble using Zas or Mac, load with Mload, then rename object file to filetype IOP. Here's a good segment from which to learn IOP coding techniques. Twelve keys of 24-characters each are possible, cleanly fitting standard ZCPR3 IOP 1.5k-byte memory space.

Many such segments may be created and saved with different file names and auto loaded as appropriate within directory being worked; as Rick Conn would say, "Little CD (Change Directory) and ST (Start) does the trick." (See Newsletter 009, dated 12 November 1984.)

Programable Key allows creating and saving as many sets of loadable segments as desired. One for word processor, another for communications, for spreadsheet, database management, programming, you name it. PKey displays each key and its conversion string, and prompts for easy string change, without ever affecting program in TPA—an exceptional value. Although designed to work with ZRDOS and Z-Com, PKey (along with I/OR and BPrinter) works perfectly with ZRDOS2 and Z-Com2.

Z-Nodes swing! From all over globe come interest in our nodes. Gaffers, gripes, and gophers make it possible, make it delightful. We wait day when sending a message to France is accomplished without direct cost. Nodes grow until Earth's people fully communicate; add these to list:

19. Fred Townsend - San Jose, CA -
20. Dick Driscoll - Phoenix, AZ -
21. Robert Finch - Glendale, CA - ham radio packet 146.745 mHz
22. Thomas R. Bowerman - Anniston, AL -
23. Charles Boghosian - Durham, NC -
24. Barry L. Bowerman - Weaver, AL -
25. Douglas Thom - San Jose, CA - 408/253-1309 (online 4/12/85)
26. Robert Kuhmann - St. Martin de la Brasque, France - 011+33+(90)-77-61-36
27. Charles Hoffman - Tampa, FL - 813/831-7276
28. Stanley K. London - Aurora, CO -

ZAS is the Z80 macro assembler being used to support all Z System programming activities. ZAS creates Intel HEX or Microsoft REL files permitting its usage in place of Asm, Mac, Rmac, and Macro-80. Supporting program provided (Zcon) converts Intel 8080 mnemonics to ZAS Zilog format. Another (Zlib) permits creation of binary REL subroutine libraries; adding, deleting and replacing modules, and printing module names and public symbols from a library are features.

Others (Zlink and Zref) permit COM file generation from REL modules and symbol-label cross reference to numbered source code lines. Either ZAS or Zlink optionally produces DRI compatible SYM files for use with DSD, Sid, or Zsid.

By the way, DSD (with 55 commands!) ships in two versions along with in-context (individual-command) online help. These versions run automatically with Z (ZCPR3 and ZRDOS) after installing using Z3INS.COM. One handles extended Intel (similar to TDL/Xitan) mnemonics; the other, Zilog. Both run with either 8080 or Z80 micro-processors. Under CP/M-80, both require patch-file editing for your terminal and use of debugger ZDM (or DDT) to overlay main DSD object file. Source provided permits editing for your terminal code and after assembling into hex file, overlaying both Intel and Zilog versions of DSD.COM.

Prices reduced for three Echelon products. We seek wisdom, not money (really?), so we have reduced prices for these EI software packages: DSD and both versions of Z-Com2, Items 07, 08, and 25 (see attached List Prices, dated 15 March 1985). We wish we could cut more prices but expenses must be covered. (Notice addition to list of off-shelf Z-Msg—Metal message program for Z System—bulletin board, file and mail system! Also, all versions of Z-Com and Z-Com2 are supplied with I/O Package buffer space allocated, so PKey and other segments are ready to load.)

Amateur Z-User Corner: ZDM (or DSD and DDT) makes neat emergency HEX to COM file converter. Load your HEX file (note last used address displayed under PC NEXT message) using I<filename.HEX><cr> and R<cr>. Then exit and save number of hex pages (xxh) to <filename.COM>. Number of pages (each two records, 256 bytes) to save is determined by dropping the two right-hand digits from PC NEXT address. For example, if address is 124F, round off right two digits and use SAVE 12H <filename.COM> as your command line. But if address is 1200 (on whole page boundary), round down one and save only 11H pages.

Z-Node Central has a number of popular pre-configured ZCPR3 installation files: ready to install for Kaypro, Osborne, Morrow, Epson, Xerox, Apple, Heath, iBex, and Jade. Look for them in ARCHIVE directory of node. Shortly, all Z-Nodes will have these files. If you are having trouble installing Z3 on one of these machines, study files to obtain get-over-stumbling-block ideas.

Computers and Electronics magazine publication termination announced by owner Ziff-Davis (they cancelled **Microsystems** last October). Circulation is 600,000! Now we ask: on what list should Z-D be placed? Do colors exist darker than black? Ceasing publication of one magazine in favor (to prop up sales) of another (un-named magazine owned by Z-D, actually **Creative Computing**) should produce a few subscriber reactions, cancelations without further regard for any Z-D publication. We move away from such business logic—such decision makers have no feeling for what they are about—leading to these actions. Managers and owners have every right to do as they think best; we have a right to contemplate Z-D going out of business altogether. The planet and cosmos, in our opinion, need neither their outlook nor expertise.

Microcomputer boom continues! Substantial 1985 gains (20% over 1984) predicted in all areas, best likely is portables (their sales could double over '84, especially if flat panel displays get easy to read). Next is home and then office desktops. Sales to hobbyist and tinker, being neither of majorities nor mainstreams, are down in noise.

And still, many vital niches exist for small companies; Echelon caters to those wishing to learn no matter where (home, office, shop, or laboratory) they use computers. We work on LAN (local area networks permitting computers to talk to one another) concepts, AI (artificial intelligence) usefulness and what can be done with more powerful (5th generation) software and databases, one computer/one user, and GSS graphics, but learning (expanding one's awareness) is above all else. You hobbyists and tinkers, you remanence, come join and learn as we learn!

Why we do what we do! Sometimes we think with words that are unwritedownable and notstotalkaboutable. But clarity notwithstanding, you know we support high performance Z80 instruction set compatible microcomputers. Eight-bit systems are (to us) symbols of neatness (simplicity) and efficiency (only if assembly language is used) and mental challenge (must be creative to be competitive with 16/32-bit micros). Remember, each letter and number in our alphabet is represented by 8 bits (a byte) in each machine.

We provide screen upon which light shines. You are our light, you fire us up to jet speeds, passing eagle and humming bird. Those who jump on bandwagons thinking there is no viable alternative: not figuring things out for themselves, not continuing to learn, not becoming willful, not alive, are our light too.

Capacity for enjoyment increases as we learn—that's why we do what we do. Joy comes from simplest of accomplishments: a buffer loads, screen fills with text, data viewed, a beginner overcomes a hurdle. Our bird—though caged—sings! See you down the lines...

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Z-NEWS 109

Z TIPS: Bruce Morgen (Ivyland, PA) makes Poke&Go operate faster, improves his original idea of altering an application program loaded in memory and then running application. Here 'tis:

POKE&GO2 - Improved version for ZCPR3 systems that support the GET command. GET is 3/10/85 pretty economical in terms of code length within ZCPR3, so if you have a macro assembler [like ZAS] I strongly recommend you implement it - makes POKE&GO much faster and eliminates need for ZEX, using the following ALIAS script [comments right of vertical bar, |, are not part of alias]:

A0:SYSTEM>ALIAS WSD

ALIAS, Version 1.1

Alias Name: WSD

Old Alias Command Line:

- 1 --> A0;; |GO TO SYSTEM DIRECTORY
2 --> LDR SYS3.RCP; |LOAD RCP THAT HAS THE POKE COMMAND
3 --> GET 100 WS.COM; |LOAD WORDSTAR WITH GET (PROGRAM DOES NOT RUN)
4 --> POKE 036B 22; |SET RIGHT MARGIN TO 35 (ACTUALLY 34 DECIMAL)
5 --> POKE 0378 00; |SET INITIAL MODE TO DOCUMENT FROM NON-DOCUMENT
6 --> \$DSU;; |RESTORE ORIGINAL DIRECTORY
7 --> GO \$1; |RUN LOADED WORDSTAR WITH OPTIONAL FILENAME
8 --> A0;; |BACK TO SYSTEM DIRECTORY ON EXIT
9 --> LDR SYS.RCP; |LOAD REGULAR RCP
10 --> \$DSU: |EXIT TO ORIGINAL DIRECTORY

Never to be outdone, Echelon staff produced two new aliases; first one reduces clutter of files along system search path. As an example of concept, using HLP files, put all help files in a directory not used by other files and not along your search path (say A12:). Rename HELP.COM to HLP.COM and place along the path. Next create an alias along path called HELP containing:

- 1 --> A12;; |you could call this directory HELP:
2 --> IF NUL \$1;
3 --> HLP ZCPR3; |default entry point
4 --> ELSE;
5 --> HLP \$1; |get declared HLP file using HLP.COM
6 --> FI; | (endif)
7 --> \$DSU: |return to original directory

After implementing above, help is obtained from any directory by typing the word HELP followed by pressing cursor return, <cr>. Alias logs into A12:, HLP ZCPR3 combination runs. Then when finished viewing help screens, logs back into original directory. Help file name need not be entered on command line, then ZCPR3 (or other entry point specified by your custom alias, line 3) top-of-tree file is executed. But any name may be specified to by-pass default file help entry point. Neat! Global aliases can be created to speed just about any task you think of.

Next, who in the Z community has created a PRINT command alias that direct requested number of printed copies of a file be made? Desired quantity is requested using command line trailing attribute. One way it's done is using ALIAS, ZEX, IF/ELSE/FI, GOTO, ECHO, REG and, of course, PRINT. Our staff developed below example in about 20 minutes (surely you have an example that's better). We called the controlling alias PR which contains few lines:

```

1 --> IF EXIST $1;           |put printer to work if..
2 --> ZEX PRINT $1 $2 $3;    |..file exists.
3 --> ELSE;
4 --> ECHO ++ $1 NOT FOUND ++; |if not, tell!
5 --> FI                     |keep balance

```

Nested batch file PRINT.ZEX contains sixteen command lines, but it's smart (and some of it is a little tricky). Online documentation in IF, Z3UTIL2 (for REG), and CMDFILES (for GOTO and ZEX) describe what must be known for understanding:

```

;
; PRINT.ZEX prints declared copies of a file from PR alias
;      ^&  suppress False IF's
;
if NUL $3           |if no PRINT options specified assume..
reg S0 $2           |..$2 contains number of copies.
else
reg S0 $3           |set REG 0 to number of copies from $3
fi                 |balance 'if' with 'endif'
;=again            | 'loop' entry repeats file printing
fi                 |keep balance when looping
if 0                |REG 0 must be one or greater to print
else
if NUL $3           |if options not specified drop $3 and..
PRINT $1           |..use defaults of PRINT.COM.
else
PRINT $1 $2        |execute PRINT with declared options
fi                 |keep balance under all conditions
reg M0             |decrement REG 0 by one count (-1)
GOTO again         |continue printing (final FI in..
;                 |..controlling PR alias.)
; Printing Complete
;

```

For more one or more printed copy of a file (after placing PRINT.ZEX and PR alias along search path), type PR <filename> [options] <number of copies><cr>. File to be printed must be in current directory. An example: **PR fn.ft e 5** produces five "exact" copies of fn.ft on your printer; **PR fn.ft 2** prints 2 copies at default PRINT settings. PR.COM and PRINT.ZEX could be in A15: (ROOT) directory and fn.ft in B0: (WORK1). We used controlling alias simply to not have to type ZEX on command line. ZEX file could be more structured by nesting conditionals--as is, works fine. Many ways exist to do "looping" tasks--let's hear about yours! Z waits for you to unleash its vast power!

Z-Node proliferation continues! Newest additions (more needed in areas of Atlanta, New York City, Chicago, Miami, Dallas, and Houston):

- 29. Edward Unrein - Altamonte Springs (Orlando), FL - 305/295-0844
- 30. Ben Ragan - St. Louis, MO - 314/423-7038

FLASH: Steve Ciarcia's "Circuit Cellar" of **BYTE** Magazine will fully describe superior single-board computer called SB-180, useful in industrial control, desktop and portable personal computing applications. (Also, hobbyist and tinkers will find much here--it's a construction article--to expand their horizons.) Use of Hitachi CMOS HD64180 super 8-bit chip gives computer 16/32-bit performance at extremely low prices, and runs Z80/8080 instruction set, CP/M-80 software. Board is bundled with Echelon Z software. (See newsletters 105 and 107 for computer benchmarks.) SB-180, both

hardware and software, descriptions appear in two contiguous before-end-of-1985 issues of **BYTE**.

Selling price for computer not presently established (should be around \$400.00 assembled and tested, without power supply or disk drives), but from performance rating it'll be tops. Full Z System comes with it, ZAS and ZDM, macro assembler and debugger tools included. BIOS handles popular 5.25 inch disk formats, as well as 8" standard and others. RAM disk is part of BIOS for quick assemblies, edits, and compiles. Also, one parallel and two serial ports, SCSI hard disk expansion and local area network ports, printer buffer option traded for RAM disk storage, plus software configuration of hardware resources, number of memory waits states, 6.1 or 9.2 mHz cpu clock speed, I/O channel baudrates, parity, word lengths, etc. Physical size permits mounting on 5.25 inch floppy drive side. SB-180 and bundled software is available from Micromint, Inc. (25 Terrace Drive, Vernon, VT 06066) after first **BYTE** article appears.

Echelon product delivery update: We have been experiencing significant delays in shipping our off-the-shelf products because of large amounts of business activities beyond our staff's ability to handle. But Wait! We are getting on top of it--patience! **ZCPR3: The Manual** has moved forward another step with Rick Conn approving "galley" proofs produced by publisher, New York ZOETROPE; shouldn't be too much more waiting before we start book shipments to you, our customers. (Believe, we want book as much as you.) Term3 moves slowly--Rick is giving it all the attention he can--it's worth waiting for! ZRDOS2 should start shipping by middle of this month...more work to finish it up than first calculated; but it nears completion, not much left presently to do.

Texas Instruments and Kaypro (among others) **each announce** computers similar to IBM PC-AT; AT&T announces voice/data computer, as does Compaq Computer. IBM ceases PCjr production! King is dead--long live kings?

Voice versus keyboard command and data entry is much discussed for present and future control and ease of computer operation. We think real issue is being missed. Ideally, numbers must be accurately entered; word, phrase and sentence carefully chosen. Spelling, grammar and style checkers do a good job of catching typos and loose wordage, but every number of a spreadsheet had better be correct else results could be very misleading. Moreover, if input data is in error results may look okay, but neither computer operator nor end-user of information know calculations were made from faulty input data. Disaster! And now the judgement: of what value results, even if correctly developed and obtained, if equations used to generate them are not understood? Power comes from getting results and fully knowing how they were obtained.

The microcomputer is more than tool to do familiar things faster than done using older methods: by Deity-on-high, it's a means to personally grow and to learn of fundamentals of life, of thinking, of being. Don't equate microcomputers to appliances, as if similar to automobiles that you need only learn to drive, to use; and not know how they work, how they think! Yes, machines think--if you disagree, wait another 2 years for evidence even "flat-earthers" won't be able to repudiate!

Are not ideas more important than paper on which words (expression of ideas) are printed? Are not users more important than tools or machines? Be more than drone or clone--be master, be elitist using inner-directed imagination! See you down the lines...

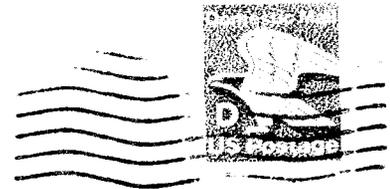
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Jud Kewell
Toronto RCP M Systems
4801 Dundas Street W
Mississauga, Ontario CANADA

Z-NEWS 201

Z TIPS: We feel conditional testing aliases and IF12 submitted by Charles McManis (Sunnyvale, CA) so important we reproduce some of his work here for your information. Notice technique of indenting to indicate conditional nest level. Effective during alias design, but code is entered as one long line when keystroking in actual alias. IF12.LBR is on Z-Nodes; extract IF12.COM and it's ready to run after installing to your Z3 environment.

"One small modification to IF.COM allows comparing wild card characters and ambiguous file names (AFNs). Feature adds needed flexibility to some aliases. Change affects only fcb conditional statement: **IF fcb1=fcb2**, where now fcb1 and fcb2 may be AFNs and still set IF state true if a match occurs. Following statement is thus accepted:

```
IF $1=*.?Q? ;NOTE sets condition TRUE if $1 is a squeezed file.
```

"Both fcb1 and fcb2 may contain ? and * ambiguous characters. An example of use of this new situation is shown in following aliases that manipulate a library containing squeezed ZCPR3 utility source files."

Alias: PUT - Store source file in SOURCES library

Usage: **PUT <name> [E]**

where E indicates external files are erased at completion.

Statements	Comments
IF \$1=*	Match filename with no type
IF EX \$1.MAC;	Check if file exists
SQ \$1.MAC;	Squeeze before storing
INSERT \$1.MQC;	Insert into library
IF \$2=E;	See if externals are to be erased
ERA \$1.M?C;	Erase squeezed/unsqueezed copies
FI;	
ELSE;	
ECHO \$1.MAC NOT FOUND;	Announce unable to find file
FI;	
ELSE;	Syntax reminder
ECHO PLEASE DO NOT INCLUDE FILETYPE.;	
FI	Done

Alias: GET - Retrieve source file from SOURCES library

Usage: **GET <name>**

Statements	Comments
IF \$1=*	Match filename with no type
IF EX \$1.MAC;	Check if file exists and..
ECHO FILE EXISTS!;	..do not overwrite if it does.
ELSE;	
EXTRACT \$1.MQC;	Get named file from library
FI;	
ELSE;	Syntax reminder
ECHO PLEASE DO NOT INCLUDE FILETYPE.;	
FI	Done

Now the single-line nested aliases:

Alias: INSERT - Insert files into SOURCES library
Usage: **INSERT** <name.typ>

Statement	Comment
-----	-----
NULU -O SOURCES -A \$1 -X	Add file then exit

Alias: EXTRACT - Extract files from SOURCES library
Usage: **EXTRACT** <name.typ>

Statement	Comment
-----	-----
NULU -O SOURCES -Q \$1 -X	Extract file, unsqueeze if necessary, then exit.

Of course, INSERT and EXTRACT could be placed directly in GET and PUT. Advantage to having these outside (nested) is ease of change, and can be used alone, if desired. (One day soon we will have a full editor to enter and alter alias command text, making changes easily without having to completely re-do.)

IF12 contains built-in help, obtained by entering command name followed by ZCPR3 conventional double slash, //. **IF12** //<cr>:

IF, Version 1.2 - Conditional Test

Syntax:

IF condition arguments **-or-** IF ~condition arguments
where a leading "~" negates the effect of the IF Condition

Possible IF Conditions are:

T	Always TRUE
F	Always FALSE
EMPTY <file list>	T if Files are Empty
ERROR	T if Error Flag Set
EXIST <file list>	T if Files Exist
INPUT	T if User Hits T, Y, CR, or SP
NULL arg	T if No Arg Follows
TCAP	T if ZCPR3 TCAP Available
WHEEL	T if Wheel Byte Set
reg value	T if Register reg = value
fcbl=fcbl2	T if the Two FCB values are =

Only first 2 letters of keywords are required

The leading "~" is effective with all conditions except fcbl=fcbl2

Congratulations and thanks, Charles, for upgrading IF and providing such useful aliases--super job!

Do remember, before using Charles' aliases and new IF.COM, to disable your resident (RCP) IF, if you have one; else use a different name, e.g., IF12, as upgraded COM file name and as conditional (IF12) name in Alias and Zex files.

The above four aliases plus those we described in newsletter 109, dated 8 April 1985, demonstrate automation ease using Z System utilities. Also, Z-Node #2 Sysop, Al Hawley, has released a file (ALIAS.FUN) showing many tricks possible with aliases.

And Z-Team Member, Joseph Wright, wisely seeing need for less message display from certain Z3 utilities, has produced a group of "silent" utilities responding to QUIET.COM. These (CD, LDR, PATH, QUIET, WHEEL) are on Z-Node Central as SILENCE.LBR and show no messages under QUIET--very useful for secure installations and many turn-key applications.

Additional Z-Nodes coming online:

- 31. Richard A. Peterson - El Paso, TX - 915/755-3342
- 32. Allan E. Levy - Satellite Beach, FL -
- 33. Mark R. Evans - San Angelo, TX -

Doug Thom (San Jose, CA), Z-Node #25, wants all to know he is online now and desires callers, lots of them. His modem number is 408/253-1306. Let him know you appreciate his activities to support high performance 8-bit computer developments.

EDIT by Mike Rejsa (Minneapolis, MN) is now supported by Echelon and bundled as OS editor in our OEM packages (it's fully public domain, not copyrighted). EDIT is adequate for short document creation and maintenance, and ideal for use in Zex or Sub files. We supply an easy to read and learn from operator's manual. Look for COM and summary command reference card on our Z-Nodes as files EDIT.OBJ/CRD.

EDIT is more than 1) an editor: it's 2) a file patcher, 3) list to printer with pagination, 4) hex dumper, 5) file size and disk status reporter, and 6) copy file to another disk utility—in 2k-byte COM file! EDIT doesn't generally replace WordStar, WordMaster, Mix, Vedit, etc.; nonetheless, it's quick and doesn't use much disk space. We're using EDIT in aliases and Zex batch files 'cause it loads so fast; try it and let us know what you think.

Apple (CP/M disk format) ZCPR3 Core, Utilities, Z3-Dot-Com and Syslib3 are shipping. For so much patience, thanks Martin Rosenfeld, Jerry Levy, Mike Damiani, Julio Ibarra, George Proctor, and especially, Lloyd Hogan. Also, the gang at Hughes Aircraft get several gold stars for unusual forbearance.

Wyse Technology, our favorite peripherals company, returned a profit of 2.2 million dollars on sales of 22.3 million for last quarter. Increases of 385 and 238 percent, respectively, over similar period last year! Their competitor, TeleVideo, didn't fair well with loss of 8 million on sales of 26.7 million—sales reduction of 38 percent and loss of .19 cents a share compared to last year's .14 cent profit. Perhaps their new Model 955 terminal (\$699.00) will put them into hunt, be what they need to get going again.

Wyse has real winners with their WY-50, 75 and 85 terminals (they've sold nearly 200,000 of 'em), enough better to keep ahead of competition. Echelon wishes Wyse President, Mr. Bernard Tse, and his team of spirited workers continued good fortune! With IBM's image tarnished by PCjr production cancellation, time is ripe (interval within the octave) for big position gains.

EXPECTATIONS: One main advantage of microcomputers is that you control hardware/software without having an expert intermediary (priest) doing the work. But to be effective you must dedicate yourself to learning how to efficiently use your machine, to have it do constructive work for you! The two-edged knife: finding time (simply by setting priorities there's always time) to become more than we presently are—induced magically by learning, through self-discovery! We call everything **WORK** that's conscientious effort and intentional suffering performed to improve ourselves. "There's no free lunch!" So many think, act as if there were. What does free-lunch mean to you?

See you down the lines...

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Z-NEWS 202

Z TIPS: Eagerly awaiting completion of VFILER Version 3.5, upgrade by Al Dunsmuir (Scarborough, Ontario, Canada), we submit here what we think are useful VFILER notes. But first, we show VFILER built-in help (menu of commands using screen highlighting), obtained by typing "?" or "/" (unshifted ?) toggle at VFILER Files display command prompt. Last of three displays is Macro Menu (VFILER.CMD file).

B0:WORK1 VFILER, Version 3.4 [Z-80 Code] Fn.FT

-- Tagging Commands -- File Operations -----
T - Tag File C - Copy File D - Delete File
U - Untag File F - File Size R - Rename File
W - Wildcard T/U Q - usQ File
G - Group Copy/Delete/FSize/usQ/Tag/Untag

-- Cursor -- -- File Print & View -- --- User Functions ---
^E P - Print V - View 0-9 - Execute # - HELP
^
^S <--> ^D -- Movement Commands -- --- Miscellaneous ---
v <SP> - File Forward A - Toggle Alpha Sort
^X <BS> - File Backward H - Help File
+ - Screen Forward N - New DIRECTORY
-- Screen -- - - Screen Backward S - Disk Status
^A Left J - Jump to a File Z - ZC
^F Right E - Refresh Screen ^C,X - Exit

Command (? = Files): █

When in Files display, command line shows as: Command (? = Help):. The drive/user area (directory name) is shown in upper left corner; current-file cursor points to, at upper right. Commands may be executed from three (3) user interface displays: files, built-in help and macro menus. Current File shows from all displays, even Macro Menu.

Instead of 6 or 7 seconds, VFILER 3.5 loads in about 3 seconds (thanks to Z-Noder Jay Sage, Newton Centre, MA), using 8" DSDD drives, indicating a really useful, little noticed utility. Observe internal macro command menu (User Functions) is obtained by typing "#", fully relieving any necessity to remember the ten (10) custom commands.

VFILER does things you want it to do: unsqueeze files to printer, console or to another file, or unsqueeze on a wildcard and group basis. Single or group tagging/untagging, copying, renaming, deleting, viewing, and paginated with-header printing. Also wildcard tagging/untagging of files for further processing--nothing is as quick and as simple as VFILER for general disk and file housekeeping, and as macro-command main entry into turn-key menu/command-line drive computer system!

Now we design an example CMD macro command file (with Macro Menu) to manage ZCPR3 source files, by keeping them in a squeezed library called (by Charles McManis, Sunnyvale, CA) SOURCES. Z-News 201 showed how library automation is realized from ZCPR3 command line using aliases PUT, GET, INSERT and EXTRACT. We use two of these in our design and VFILER current-file pointer to insert/extract files into/from SOURCES, plus additional aliases and commands assisting other activities.

Remember, several CMD files may be used in your system by placing each in a different directory, using current directory and search path to access desired one. The command lines of CMD are separated from Macro Menu by the "#" symbol, the same symbol used to display menu. VFILER.HLP contains information necessary to write custom CMD files. While in VFILER, type H to access this documentation; outside, use command HELP ZCPR3 with HLP files along your path.

```

; TITLE: Source Code Library (SOURCES) Manager
0 xdir %d%u:*. * ogoh'Attributes (p=to printer): '
1 get 100 ws.com;poke 392 ff;go %d:%f
2 putit %$
3 extract 'File name to extract (<filename>.MQC): '.mqc
4 lu -o SOURCES -m
5 CAT::catscan 'Master Catalog Search (e.g. *.doc): ' *.*;WORK1:
6 tmaker get incomel0.ei e;ac BACKUP:=%d:incomel0.ei /a
7 modem7
8 mb %d:dims
9 protect %$ 'Attribute (r=r/o, s=system, a=archive): '
#

```

```

>>> Z-System Source File LIBRARY Management Menu <<<
      Files Squeezed/Unsqueezed On Entry/Exit

```

```

-----
0 - Directory of Current Disk (XDIR) - 0
1 - EDIT Current File (non-document mode) (WordStar) - 1
2 - Put MAC file into SOURCES Library (PUTIT) - 2
3 - Extract MQC file from SOURCES Library (EXTRACT) - 3
4 - Enter SOURCES Library (LBR) (NULU) - 4
5 - Scan Master CATALOG from Console (Discat CATSCAN) - 5
6 - Financial Tally (T/MAKER) - 6
7 - Telecommunicate via modem (Modem7) - 7
8 - Database Management System (MBasic + DIMS) - 8
9 - Set Current File Attribute (R/O, R/W, Archive) (PROTECT) - 9
-----

```

XDIR is set here to give a display horizontally sorted by file name (not vertically by file type, the defaults for XDIR) of all files on current disk. Notice how trailing command attributes are easily added to CMD command text to bring out features desired. Text between apostrophes (prompts to user) may be nested, to be answered by user, one following another!

WordStar 3.0 is poked at location 392H (a byte altered) to make sure non-document mode is used for program source code editing function (no high bit-7's set that way). GO executes WS at standard Z (CP/M) location 100H. Program file is pointed to with VFILER cursor arrow, passed to WS as %f file. Your ZCPR3 CCP must be assembled to have GET and GO active.

Library program NULU (Martin Murray's replacement for LU and LSWEET) has been renamed to LU. PUTIT alias is: **sq \$1;era \$1;insert *.mqc**. INSERT and EXTRACT aliases are from Z-News 201; sq is SQUEEZE program. (We learned GET alias name conflicts with ZCPR3 resident, intrinsic GET, which loads a file without execution at a specified memory location--JUMP intrinsic runs program.)

Using 3 to extract a file from SOURCES library results in prompt for file name of MAC file desired. Only file name is entered without file type. File copy is automatically unsqueezed exiting SOURCES library, details in EXTRACT alias.

Master disk and file catalog is scanned using Rick Conn's DISCAT (Echelon proprietary) program (see Newsletter 008, page 2). Here's a case of shell-menu controlled directory (CAT) being entered from shell VFILER. The DISCAT menu permits running VFILER and chaining back when finished. Of course, going to HELP directory from VFILER results in nested shells also. Where does it end--it doesn't! Disk B0: is directory WORK1 (see Newsletter 104, page 1).

Study the newsletters and HLP files and your ability to create macro CMD files increases quickly. Try some--start slow and debug each command line before going to the next--learn a little, do, learn more. Aliases and Zex file in Z-News 109 and 201 set the mood! (Next newsletter covers Files display and adds more notes.)

Z-COM is big success! Now you can install Z-System on your computer in a few minutes, with I/O Package Segment ready to use PKey and other I/O packages you or we develop. You have all the functions of full-up Z without modifying your BIOS. Z-Com cold boots as your operating system by using CP/M CCP patch technique described in Newsletter 009, but ZC is used as command instead of Z3.

Licensed users of **Z3-Dot-Com** may upgrade to **Z-Com** (with I/OP) for \$40.95 plus tax (if any) and shipping and handling of \$3.00 (a \$99.00 value). Included is rose-pink two-sided command and installation card, two disks of latest ZCPR3 utilities, along with six (6) special ZRDOS utilities and full online HLP documentation. Notice command 6 in above CMD file, how auto-archiving (backup) of edited (changed) file occurs using ZRDOS Archive Copy utility!

Z-Node Network nears completion in United States—need several nodes in Europe and Asia. These apparently won't come automatically to us, so we will search them out!

- 25. Douglas Thom - San Jose, CA 95129 - 408/253-1309 (number correction!)
- 34. Rod L. Blackman - Visalia, CA 93291 -
- 35. Norman Beeler - Sunnyvale, CA 94086 - 408/245-1420

Amateur Z User's Corner: Where to go to efficiently obtain more knowledge, understanding of computer operations and usage—try your public library! We know our writings don't completely cover your needs, but there's lots of books and magazines we recommend reading and studying that will:

- 1. Soul of CP/M: Using and Modifying CP/M's Internal Features, Mitchell Waite
- 2. The Programmer's CP/M Handbook, Andy Johnson-Laird, Osborne/McGraw-Hill
- 3. Inside CP/M, Dave Cortesi of Dr. Dobb's Journal
- 4. User's Guide, P.O. Box 5245, Redwood City, CA 94063, 415/364-0108
- 5. The Computer Journal, P.O. Box 1697, Kalispell, MT 59903, 406/257-9119
- 6. Micro Cornucopia, P.O. Box 223, Bend, OR, 97709, 503/382-5060
- 7. Micro/Systems Journal, P.O. Box 1192, Mountainside, NJ 07092, 201/522-9347

First seven issues of **User's Guide** are great for learning CP/M, WordStar, MailMerge, SuperCalc, Modem7, dBASE II, T/Maker III and other popular 8-bit programs. These back issues are sold for \$6.00 each. Exorbitant, you say; yes, but worth it!

It'll take approximately two (2) years of study and computer operation to feel you know what's happening. After 1000 hours of activity you are above average in capability to understand the new and to do, way ahead of majority in these days of computer literacy—you know-you-know what's going on. Wonder what a "power user" feels? Study no more than two (2) hours per day. Facts need to settle into your bones, soul before more is laid on, a basic homo sapient learning characteristic.

Digital Research (Pacific Grove, CA) continues to demonstrate truth of harsh words used (see 15 October 1984 Newsletter 007, page 4, next to last paragraph) to describe their understanding of customers, of business, of life. (Yuppies and MBA's do not make a business.) Their Unix activity is dissolved, as is their languages division; neither 8 nor 16-bit CP/M activity remains. All eggs are in GEM (Graphics Environment Manager) basket...but will Apple Computers sue? We expect them to see really hard times in less than six months (DRI founder Gary Kildall deserves better; Gordon Eubanks, author of EBasic and CBasic, would agree), unless a miracle! May their new Concurrent DOS-286 take off. See you down the lines...

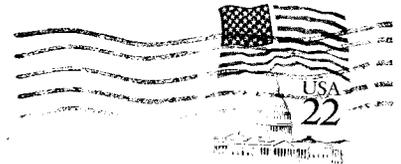
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Z s e t s y o u F R E E !

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Z-NEWS 203

Z TIPS: VFILER Files display! A somewhat three-dimensional-display effect is achieved as current-file pointer moves up/down/right/left, because file name in upper right screen corner simultaneously changes. If more than 72 files are in a directory, simply pressing + or ^A and - or ^F moves display up/down to next screen, respectively. (Newsletters 104 and 202 have more on VFILER operations.)

B0:WORK1		VFILER, Version 3.5 [Z80 Code]		CHECKS .DOC
ANOTHER .TYP		ANOTHER .ZZZ	ABLE .100	AMOS .DOC
BASIC .TST	-->	CHECKS .DOC	LTR .101	LTR .102
LTR .109				

(FLASH: 3.5 is on Z-Nodes)

Command (? = Help): █

VFILER sample display is shortened for space sake...actual is up to 18 file rows of four columns (72 files per screen). (Yes, Version 3.5 is on Z-Nodes.)

VFILER is a ZCPR3 shell. Shells are soft(ware) covers that provide different interfaces from standard. Additionally, shells perform functions and execute commands always knowing how to return to their origins. For example, VFILER uses a set of single or double keystrokes to automate file and disk housekeeping operations. Also a macro language permits complex series of events to occur from but a single keystroke entered by the user--yes, drastically changed interface from that available at Z-System command line! Other important shells are MENU, VMENU, ALIAS, SH and HELP. Each provide a special interface to quicken and ease tasks to be performed. We've not discussed SH and HELP but they soon get their turn in Z-News.

The Z command line is always just a keystroke away while using VFILER (or VMENU and MENU). Type Z and you are there! When your commands have executed, you return automatically to VFILER Files display, ready to continue processing.

Next tip: **Dreas Nielsen** (Corvallis, OR) has used his imagination and created a menu driven environment using aliases, Zex and Vmenu. His concepts demonstrate latent power of ZCPR3, using GET, GO, REG, SH, SHDEFINE, SHCTRL, SHSET (makes a program or alias into a shell), SHVAR, SHEXIT, SETFILE, IF/ELSE/FI/XIF, GOTO, and ECHO. **WOW!** Here's complete VMN menu used (four rows of four files per row display at top):

C0:BACKUP		VMENU, Version 1.3 [Z80 Code]		EXTRACT.COM
No File		ADDQ .ZEX	DOMULT .ZEX	EIASSO .DD
EITEAM .DD	-->	EXTRACT .COM	GETIT .COM	INSERT .COM
MENU .BAK		MENU .VMN	PUT .COM	PUTIT .COM
Q .COM		QM80 .ZEX	QRUN .ZEX	QSPECIAL.COM
				[more files]

Arrow keys move current file pointer

FILE QUEUE MANAGER

Q Add file to queue	R Run	all files in queue
V View queue	T Type	" " " "
E Empty queue	A Assemble	" " " "
X Exit	S Specially process	queued files

Command (CR=Menu) - █

Q.COM starts menu display of MENU.VMN on your current disk with VMENU.COM and rest of ZCPR3 utilities along your search path. We suggest putting them out-of-the-way in A15:ROOT directory. A file is placed in queue (tagged) for processing using Q, the current file pointed to; pressing E removes all such files from queue.

VMENU shows sixteen files at once, with "+" and "-" used to get more. You can log into VMENU using wild card file declaration to select only those pertinent. Bottom two-thirds of screen is for single-stroke menu display; last is command line. (See Z-News 106 for VMENU, MENU, and VFILER features comparison.)

After queuing-up each file by moving pointer and pressing Q, files are "processed" by pressing R, T, A, or S. If S, you are prompted for command name, e.g., PRINT.COM and trailing options (parameters). Of course, you may add other processes and commands may be added to the VMENU command list for your special needs.

Bravo! QUEUE takes Z users to another level of task/interface abstraction. Concept works best using RAM or fast hard disk! The Z community has much to ponder, learn from contributions of Dreas Nielson.

Look for file QUEUE.LBR on Z-Nodes; Dreas' complete works are there. His aliases may be used as-are by installing to your system using Z3INS and your ENV descriptor.

Z-Node #15 needs more callers! Chicago area computerists have local access to super Kaypro BBS and Z-Node run by Sysop Richard Jacobson. He welcomes callers from elsewhere, too! Try it--dial 312/649-1730 and behold treasures offered your modem port.

36. Richard Mead - Pasadena, CA 91105 - 818/799-1632

Software Support: If you have ZCPR3 configured for your machine and your machine is special and not in our ARCHIVE library of pre-configured files, please put collection into LBR file (using LU or NULU) and upload to the nearest Z-Node. (See Z-News 108, page 3, for what we already have.) We'd like others to benefit from your work!

Programs and utilities for which we supply source code we welcome, we invite users to upgrade...we don't expect fixes or upgrades to our proprietary programs, programs for which we supply only object code, like Discat, Z-Com, Zas, etc. (We are fully responsible for fixing bugs in a timely fashion and for improving these.)

We request you notify Z-Node Central (Dave McCord, Sysop) of your desire to change a Z-System program; only one person at a time works on each file. You "check-out" a file for up to a month, return it for approval, and if accepted, changes you made become official distribution.

Features you would like added to upcoming revisions of Core, Utilities, and Tools, should be jotted down and sent to us. We'll analyze universal desirability of suggestions and act accordingly. Thus, Z expands as we grow together in understanding, creating a computing environment paralleling our mental, intellectual capacity. What other software company acts like Echelon? And what other company handles the quantity of program code that we do?

Amateur Z User's Corner: Automating your routine computer tasks is exciting and saves much time in the long run. Remember when setting up, writing CMD, MENU, VMENU files to always declare files as current directory, using \$D\$U:, or have the files along your search path. Also get a feel for difference between current and default drive. Notice Z command line default versus what shows on VFILER Files display, upper left screen corner. Change default by logging in drive, e.g., A0>B:<cr> or A0:BASE>B:<cr>. It's never been made clear the difference between default (logged in) and current drive. At operating system command line the default disk is determined; from application programs, current.

If you haven't yet invested in an expensive text processor/editor like Vedit, PMate, or WordStar, you may want to look into VDO, Version 2.5, by James H. Whorton. It is full-screen, fast, memory-based, and has nearly same editing commands as WordStar. Though not a word processor, it makes an efficient program editor.

Enhancements are presently on James' drawing board, so we can expect an even more powerful editor soon. Complete VDO package (terminal install, documentation, and object files) is on Z-Nodes for downloading as file VDO25.LBR, and is highly recommended by Echelon. (We also like split-screen, two-files-at-a-time MIX editor, from MIX Software, 2116 East Arapaho, Suite 363, Richardson, TX 75081, toll free 1-800-622-4070, for \$29.95 plus \$5.00 shipping costs.)

FLASH: Wyse Technology (3040 N. First Street, San Jose, CA 95134, 408/946-3075) continues to delightfully surprise us. Their new WY-350, 64-color, 15" screen terminal, is fully upward compatible with the WY-50. The monochromatic attributes of the 50 are automatically converted to one of 16 default color combinations. Defaults are under operator control through palette selection. Thus, software that runs with popular mono-color terminals also work with the 350! These Wyse terminals operate at 38,400 baud (complete screen re-write in half second) with line drawing graphics. Certainly here is an alternate to slow bit-mapped monitors. (Wyse has been shipping 20,000 terminals a month, independent manufacturer leader.)

Spreadsheets, blessing and plague: In many cases, because of certain innate human feelings (based usually on non-understanding) that computers can't be wrong, their output is regarded far more authoritative, dependable (at least in our minds) than actual results should warrant. Many seem to take results at face value, caring not how they were obtained. (See Z-News 201 re judgement: of what value results if we don't understand how results were attained!) Who set-up the spreadsheet template? On what principles was it formed? Where is description of design criteria? What numerical ranges are valid for calculations, zero to plus/minus infinity? Who checked results with real-world, known-to-be-correct situations?

Do we want to be users of tools without enjoying the fruits of more understanding, want to be mechanical drones? We think not and we will not, if we are mindful of what's happening!

Digital Research (Pacific Grove, CA) acts like drunken sailors returning from leave, back on ship remembering when pockets were full, girls across lap, beers on table. Their expenditures for fancy buildings and networks are not stopping them from laying off hundreds of employees or stopping revenue loss. What has happened to them? They crusaded without principle, worked to just make money? They cared not for the well being of their thousands of existing customers? What business principle has DRI followed since coming out with CP/M-86 and Microsoft with MS-DOS? They position Concurrent DOS-286 against UNIX System V? Lots-a luck!

How we thrilled to see micros push and pull,
Flipping and flopping,
While IBM caved-in to distributed processing.
Yes, we love those days so splendid,
Full of unexpected and delightful treats,
When CP/M reigned tall and candid,
But now Z-System walks the streets!

We write Z-News from beautiful hills of Los Altos...these hills are alive with sounds of wonderment...we tread paths of new knowledge—join us!

See you down the lines...

Echelon, Inc.
101 First Street
Los Altos, CA 94022
Telephone: 415/948-3820
Z-Node Central: 415/489-9005

Trademarks: HD64180, Hitachi; Z80/800, Zilog; WY-50/350, Wyse; Model 955, TeleVideo; Z-System, Z-Tools, ZCPR3, ZRDOS, Z-Com, Zas, Zlink, DSD, ZDM, ITOZ, Z-Msg, Lasting-Value Software, Echelon and their respective owners and authors; CP/M, Digital Research; MS-DOS, Microsoft; Unix, AT&T.

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Jim Newell
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Z-NEWS 204

Z TIPS: Here we go again! Howard Cripe has created an alias support program that permits using your favorite editor to write aliases. Each individual command is entered followed by a carriage return; later processing converts these returns to semicolons, the ZCPR3 command separators, with line feeds ignored. Then after exiting your editor, file produced is processed by Howard's ACREATE.COM using command:

```
ACREATE <editor-created text file name> <to-be alias file name>
```

An alias COM file is thus produced, ready to run. Another file called ALIAS.MAS (should be on default drive along with ACCRATE.COM) is automatically used to make final runnable alias. But first, ALIAS.MAS must be one-time installed to your SYS.ENV file using Z3INS, Version 1.2 or later; else use ZDM (or DDT) to patch environment base-page address (found using SHOW or Z3LOC) into MAS location 10A hex (then SAVE 4 ALIAS.MAS). Thanks for your work, Howard; Z community is grateful!

We suggested awhile ago that someone put a character/command editor into ALIAS.COM, so re-doing the entire alias script wouldn't be required for each little change. Howard did the next best thing in developing ACREATE--now we wait in diminished pain for that internal editor. You who complete it, please call the program **MKALIAS**, name goes nicely with MKDIR.

Author of ZCPR3, Richard Conn, is updating SAK (strike-any-key) to permit operator to cancel with ^C while within Zex batch command files. Presently ^C drops you to next Zex command line. Other than in Zex files, SAK now works perfectly in straight commands, in menus, and in aliases. Soon it'll work perfectly, period!

Robert Greenlee recently developed a patch for Z-System ZEX batch program to permit running with XtraKey and XScreen. Those using these programs and Z3 should get patch documentation from Z-Nodes (file ZEXPTCH2.DQC), or write/call Bob at Xpert Systems, 8865 Pollard Avenue, San Diego, CA 92123, 619/268-0112.

Kaypro and ZCPR3 user, Fred Lieberman (Santa Cruz, CA) thought of a machine specific alias we pass to you. He called it BYE, the last command given as his computer power is turned off. CLEANDIR;ECHO TURN OFF MODEM AND PRINTER;SAFTEY. That's it. CLEANDIR keeps the directory tidy for possible UNERASE use; message is shown to remind to turn off hardware; SAFTEY is a Kaypro program positioning hard disk head to safe location for physically moving computer, intentionally or accidentally.

ECHELON PRODUCT DELIVERY STATUS: ZCPR3: The Manual Mr. James Monaco, President of New York ZOETROPE, publisher of the "book," has personally given us a delivery date--21 June, if no further problems develop! Echelon has arranged to have the manual dropped shipped by publisher to each customer in interest of quickest delivery after off-the-press has occurred. Delays getting this book to our customers has caused some ill-will, we know; but please hang-in with us--the book is worth it!

ZRDOS2/Z-Com2 Problems in software design has lead to much delays in project. Presently we change specification of these packages. Meeting original specification placed program into "too big" category for Z80's and 64k-byte memory spaces. So Version 2 is being reserved for HD64180's and Z800's, schedule not yet determined. For those who ordered ZRDOS2/Z-Com2, we will supply ZRDOS/Z-Com Plus, similar to ZRDOS1 and Z-Com but with full single-level re-entrance. I/O Packages such as I/OR and BPrinter work with Plus. Re-entrance results in very compact code for I/O tasks. It's the best we can do for Z80-based 64k-byte machines.

Term3 Deep in beta testing, Term3 should be shipping soon, hopefully in a month or less! Program is modular, uses ZCPR3 facilities fully, replaces BYE (public domain automatic phone answering program used by most remote bulletin board systems),

and mates hand-in-glove with Z-Msg (Metal). Of course, it handles all your communications needs as well. Having features and possibilities not previously found in any such programs, first version is shipped with letter thanking everyone for their extreme patience and offering free upgrade to planned second (and final) version. (DEMO.MNU, in DEMO.LBR mentioned above, contains a few useful Term3 command macros in special Communications Menu--a beginning.)

SB-180 Update: Single board computer using Hitachi HD64180 and Z-System is physically sized at 4" by 7" to mount on side of 5.25" and 3.5 floppy drives. Shipments start first week of August 1985! Price: fully assembled and tested board with ready-to-boot operating system and other software bundled on four double-sided, double density disks is \$499.00. Price includes SuperBIOS with 192k-byte auto-RAM disk, MOVZ, SYSGEN, CONFIG, FCV, ZCPR3, ZRDOS, EDIT, ZDM, and ZAS. Same without OS software but with SuperBIOS is \$359.00; software alone is priced at \$190.00. An ancillary board is being developed containing a full 300/1200 bps modem plus other functions; more details in a month. To order or for more details, call or write Micromint Inc., 25 Terrace Drive, Vernon, CT 06066, toll-free telephone 1-800-635-3355. (See Z-News 109 for further SB-180 specifications, 105 and 107 for early benchmarks.)

Milestone Achieved: Lots of folks haven't worked with Z-System menus. To assist getting started Echelon staff has developed an extensive set of coordinated, chained menu scripts (text files) and display screens using MENU, VMENU, and VFILER. Menu methodology is explained in a lengthy DOC file--much caring went into menu project. Since Z is the definitive 8-bit operating system and so few seem to understand it, we thought it worth expending such energy. Stated another way, we know of no system that permits production of menus and covers range of task automation as easily and as efficiently as Z. (Similar menus are used to impress OEM's potentially interested in using Z-System, instead of using more expensive, less powerful software.)

Novice computer users may be shielded completely from learning Z-System commands; experienced user's find convenience and task speed up; and consultants find organizational power important.

Fruits of our work are in file DEMO.LBR on Z-Nodes; download, study, use; then, write us what you think. Let's see your menu (and alias) examples! Our menu offering is for a 3-drive system; if you do one for two (2) drives we would especially appreciate seeing your work.

While on subject of menus and screens, one of our customers, Fred Haines, in the movie business, has automated screenplay writing and management using Z-System menus. If interested in movie script control, contact him at 733 North King's Road #331, Los Angeles, CA 90069, 213/658-8664. Work is called **Speedball Movie Maker**. Fred uses a Morrow MD3 for computer activities and one of his beta-tester software friends has planned an article about it for **Writer's Guild** newsletter. Z goes Hollywood!

Amateur Z User's Corner: ZCPR3 has no direct file move command, but CP and MCOPY are there for file coping. (ZRDOS's AC command with trailing E option is an effective file mover.) Lacking ZRDOS, a simple alias, call it MV, is created to move files from one directory to another: MCOPY \$1=\$2 Q;ERASE \$2 R;ECHO FILE(S) MOVED: \$2. Because versatile transients MCOPY and ERASE are available and used here, \$2 may be wild-card declared, and with several filenames separated by commas. Syntax is similar to normal copying or renaming, except "space" delimiter is used instead of "=" sign:

```
BO:WORK1><MV> <directory to move to> [DIR:]<fn.ft>[,fn2.ft2][,*.ft3]<cr>
      mv                $1                        $2
```

Legend: < > = required operator entry, [] = optional; fn = filename, up to eight characters; ft = filetype, optionally up to 3 characters; and, * = matches any set of characters, one of two OS file-search wildcards (other is "?" which matches any single

character); \$1 = first parameter passed after command name, \$2 = second; <cr> = RETURN, ENTER, DO, etc., keypress. Either DIR or DU directory forms may be used. Conditional testing (using resident IF or transient IF12) for existence of files or directories—canceling or displaying message if not—could be added.

Microcomputer technical jargon is no more difficult to learn than that of other professions, e.g., medical or botanical. Jargon develops as means to more efficiently communicate: one word may represent a complete concept greatly increasing speed and ease of human interactions. But everyone involved must understand language used; so let's get to meaning of seldom defined command line tails, trailing parameters, variables and arguments, and expressions like "passing." We already have an mental image of shells as used in ZCPR3 context (read Z-News 203, page one, if you don't). Mentally differentiate between file scripts entered with editor and command lines entered at OS prompt. Definitions by examples:

ECHO THIS IS A TEST. - "THIS IS A TEST." is command tail passed to program ECHO to display on terminal. Moving data from one memory area to another is called "passing."

\$f, \$n, \$t, %f, %n, %t - These are script variables used to indicate whether full fn.ft, or fn or ft is to be expanded, passed and further processed. Used in shells.

\$0, \$1, \$2, \$3 - Script parameters, expanded (resolved) name passed from command line to program, shell, or alias. May be filenames or trailing options (arguments).

WS fn.ft - "fn.ft" is command tail for WordStar, file to edit.

PRINT fn.ft e - "fn.ft e" is command tail for command PRINT. "e" is called trailing option of command.

FLASH! Quadram Corporation (4355 International Blvd., Norcross, GA 30093, 404/923-6666) soon comes out of beta testing with full-up, ready-to-boot from either 5.25" or 8" disk, S-100 bus single board computer. Board uses Hitachi super HD64180 8-bit computer chip, and contains 512k-bytes of RAM along with floppy and hard disk controllers, one parallel and two serial ports. Old timers have been waiting for this, as we have. Look for it being ready for sale in July or early August! (Further good news: Zilog Z800 chip is not dead; it's coming but we won't say when! Samples, with blemishes, are in hands of selected potential volume-user manufacturers.) Our faith in and support for 8-bit processors is slowly being materially justified.

Industry Brief: You know what IBM did to PCjr—they stopped production and it's essentially an orphan. Well, PC2 is soon (in six months, more or less) to come out. and guess what? Machine that's sold in millions is now to become an orphan! That's Life? We write and speak no more of IBM (or DRI).

Fears Stifle Our Creativity: We simply hate to make mistakes, but also we fear being seen a fool, being criticized by our peers, being mislead or misused by others. We fear standing alone with no one at our side, fear disturbing traditions or breaking taboos, not having the security of habit patterns, losing attention and love of our work and social groups; and most of all, we truly fear being an individual. Yet, we claim being individual is unique, blessed strength of being human!

See you down the lines...

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Z-News
Echelon, Inc. Systems
101 First Street
Los Altos, CA 94022



Z-NEWS 206

Z TIPS: Many have asked to have AC, archive copy program of Z-System, automatically erase file if already exists on destination directory. Well, Dennis Wright, author of ZRDOS, says to simply add "N" trailing parameter with "A" to have this feature:

```
AC C:=B:*. * /AN
```

automatically copies all changed files to C from B disk, without prompts.

If troubles are experienced running a commercial application program with Z-System because of insufficient memory, write the publisher. Ask him to please upgrade his program to work in 48k-byte TPA (Transient Program Area) systems. Ask that he organize the program to use available TPA, using disk-to-RAM swap buffers, or modular overlays. When Digital Research (Pacific Grove, CA) produced MP/M, which allocated 48k-byte TPA, standard 8-bit software design practice became: design applications requiring only 48k. We think it was good idea then, still do, to promote efficient code writing for our computing machines; we use few appliances for work, learning!

We are doing our best to convince Jim Whorton to make full-screen editor VDO a ZCPR3 utility, one that keys terminal video requirements to the system environment as other Z3 utilities do. Keep your fingers crossed.

GOTO, Version 1.2, has been updated (operates from a ZEX line) to assure multiple commands are cancelled, if on same line. Update by ZCPR3 creator, Richard Conn, now on Z-Nodes. Also don't forget to get Rick's SAK, Version 2.1, that cancels ZEX processing with a ^C. Here's how he describes these two utilities:

```
; GOTO is a program designed to be run under ZEX which permits
; branching within a ZEX file. It accepts only one argument, a label,
; defined within the ZEX file as a special comment of the form:
;      ;=label anytext
; The syntax of GOTO is:
;      GOTO label
;
; GOTO always aborts the rest of a multiple command line when it
; executes; if it did not do this, commands following the GOTO would
; be executed before the GOTO is performed (control returned to ZEX).

; SAK (Strike Any Key) is used for the following purposes:
;      1) to wait for user interaction before continuing
;          and to allow the user to abort a Multiple
;          Command Line
;      2) to command the user's attention by ringing the
;          bell at his console
;      3) cancel ZEX command file in execution (2.1 - rlc)
;
; The SAK command line is:
;      SAK /o... or SAK /o... text or SAK text
; SAK is invoked with following options:
;      A      -- DO NOT Allow User to Cancel MCL
;      B      -- Ring Bell
;      Pnnnn -- Pause nnnn seconds and continue if no
;                response by that time
;      Z      -- Allow User to Cancel ZEX
```

In original assemble/link M80.ZEX (or in ZAS.ZEX) file there's a line:

```
; Please Type $^C if Error(s) Exist - ^?
```

possible by using ZEX's built-in prompt capability. Line now can be replaced with a SAK statement:

```
SAK /P6Z Errors, cancel link (^C)?
```

Advantage here, link automatically commences if a ^C is not entered by operator within 6 seconds. But any keypress starts link operation immediately, without waiting for default pause limit. Change to 20 second pause and add repeating bell alert if you aren't attentive to console screen/keyboard after starting ZEX process; /BP20Z provides difficult-to-ignore prompt if assembly errors occur.

MORE Z TIPS: Setting up command lines for VFILER CMD and VMENU files is fun. Both programs have ability to point to a file, called Pointer File (PF), for further processing. Normally, the name Current File is reserved for files established by SETFILE or in SH.VAR, i.e., system files. (And don't confuse these with Current Disk or User.) A neat command line useful for editing files might be:

```
ECHO Use Pointer File (Y, T, <sp>, or CR=yes)?  
IF INPUT  
VDO $pf  
ELSE  
VDO "Filename to Edit? "  
FI
```

which automatically prompts for file name to edit if pointer file is not to be used. Responding to first prompt with Y (yes), T (true), space bar, or carriage return, causes pointer file (\$pf, %f for VFILER CMD) to be used by (passed to) editor. Tip comes directly from Z-Node Central: was a message to Z user, Wally Ottersbach, from Sysop Dave McCord.

Z-Node Corner: Nodes licensed to download Echelon proprietary software help support diverse computer disk formats. Contact them for Z-Tools, Z3-Dot-Com, Z-Com, DSD, Discat, ZRDOS, Z-Msg, etc. After you satisfy (pay) Sysop (by check, money order, credit card number, or other agreed-to payment method) and download, he sends your name, address, and what you received to EI; we mail printed documentation and place you on Z-News mailing list. It's simple, convenient, closed loop; everybody wins! The Z-Team downloaders:

2. Al Hawley - Los Angeles, CA - 213/670-9465
3. Jay Sage - Newton Centre, MA - 617/965-7259
7. Tim Linehan - Olympia, WA - 206/357-6757
10. Rea Williams - El Toro, CA - 714/855-0672
14. Rich Rodeheaver - Reynoldsburg, OH - 614/864-2673
15. Richard Jacobson - Chicago, IL - 312/649-1730
16. Jud Newell - Islington, Ontario, CANADA - 416/232-0442
17. Robert Tate - Altamonte Springs, FL - 305/831-6049
19. Fred Townsend - San Jose, CA - 408/262-5150
29. Ed Unrien - Orlando, FL - 305/295-0844

Announcements: 1) Norm Beeler, Z-Node 35 (Sunnyvale, CA, 408/245-1420), is an alternative if you're unsuccessful contacting Z-Node Central. Add Norm to others we recommended in Z-News 205. But please, upload as well as download; more "go-fors" provide more up-to-date files for more users. These alternates work only if we have

sufficient volunteers timely moving software from Central to other nodes. 2) Wow! Another noder signs up. Welcome to:

38. Robert L. Paddock - Franklin, PA 16323

Z-System Going Public: ZRDOS is getting modified to be controlled by a Z utility to permit (optionally) public files to be created and recognized. Fully compatible with Andy Johnson-Laird (Control-C Software) and Bridger Mitchell (Plu*Perfect Systems) approach, Z soon permits any directory to access a command file that uses overlays in another directory. Without individual patching, programs that use overlays like WordStar, dBASE, T/Maker, MultiPlan, and The Word Plus, would be placed in, say, A15:ROOT directory, with text and data files in other directories, e.g., B0 to B15. More as features mature.

But until Z has public file capability we make do using SETDRU (and WS-FIX or WSPAT-DM). Awhile ago Michael Rubenstein wrote this filter program permitting an application program to find its associated overlays in other than current/default directory. It gets the job done for WordStar, The Word Plus, Perfect Writer, and other applications. (We first mentioned SETDRU in Newsletter 008, there and then called USER.) SETDRU13.LBR is presently on Z-Nodes and other remote access systems.

SB180 Song: The Micromint SBC continues as top-of-list, must-get item, for dyed-in-wool 8-biters. SCSI hard-disk expansion interface, autostart aliases for RAM disk make it so flexible. File-load and auto-archive aliases individually generated for wordprocessing, database management, spreadsheet, communications activities make for unbelievably quick and convenient processing. Z-System custom menus tie it (what you want to do) together. Order yours now for early delivery (1st week of August) by calling Micromint toll-free 800/635-3355; phone number is good also for requesting literature and complete pricing information on SB180.

Build one (buy fully assembled and tested SBC with ready to boot software for \$418.00; add case with power supplies, about \$220.00; three half-height floppies--both 5.25" and 8"--and one fast 8" or 5.25" hard disk, \$1000.00 or so; connectors and cables, \$100.00; and Wyse WY-350 color terminal) as your second computer, and it quickly becomes your prime because of bright, shining performance! WY-350 retails for \$1195.00; ouch! multi-hue costs money. Some may feel it's not worth it and use WY-50 for \$695.00. Of course, these are retail prices and few pay that these days. Also, lots of readily available used equipment (flea-market purchases) greatly reduce final costs of any such project. (We noticed WY-100 terminals for \$195.00 from WW Components, 1771 Junction Avenue, San Jose, CA 95112, 408/295-7171.)

Micromint plans to produce a stand-alone, ready-to-run, remote access system using SB180 and a modem board they presently finish designing. Modem board uses new Xecom (374 Turquoise St., Milpitas, CA 95035, 408/943-0313) MOSART module to handle telephone/computer interface functions. Z-System, Term3 and Z-Msg will be bundled with package. More in next newsletter.

We trust Dave Thompson (Micro Cornucopia Magazine) and Art Carlson (The Computer Journal) publish articles that assist learning to build (and use) Hitachi HD64180-based computers--the future is now!

California Proverb: If you tickle yourself you can laugh whenever you wish. Get your pleasure from other than yourself, sometimes you have to wait before laughter comes! We (you and I) work (and write) where palm trees meet pines, where water tastes like wine! Miracles every day. See you down the lines...

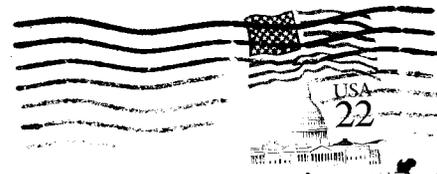
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And to well
Toronto RCP/M Systems
4691 Dundas Street W
Islington, Ontario CANADA

Z-NEWS 208

Z TIPS: AC, Version 1.1, has been placed in ZRDOS (or ECHELON) directory area of Z-Nodes (AC works with ZRDOS and ZRDOS Plus only). ZRDOS author, Dennis Wright, changed archive copy program by eliminating prompt if file exists on destination. Now simply using option /a causes changed files to be automatically copied from source to destination directory. Using /an with Version 1.0 did the same thing but file copy remained unverified. Now program seems exactly what it should be. (Dennis is creator of our three I/O Packages, Items 40, 41, and 42 on Echelon Price List.)

By the way, AC makes dandy file MOVE, as opposed to COPY, program using the trailing e option. Command `ac b:=fn.ft /e<cr>` copies fn.ft to B: directory from current, then erases fn.ft from current after coping has completed! Using AC and ALIAS, ZRDOS owners can create a mv function for moving files, one having simple and easy to remember syntax.

Richard Conn, author of ZCPR3, has finished writing a tutorial on I/O Packages. Fifty-page document shows how to modify your BIOS for efficient input/output re-direction. IOP concepts and design criteria receive detail treatments. We publish as loose-leaf and offer for \$9.95 plus shipping and handling, is Item 84 on price list. On the other hand, tutorial is so important we placed it (as file IO/PLBR) on our nodes for downloading--take it, but only if you want to learn things I/O.

Magazine **Micro Cornucopia** has commissioned busy Richard to write an in-depth article on ZCPR3 and Z-System, piece scheduled to appear in Oct/Nov issue, No. 26. Certainly, we have been frustrated in our struggle, in our inability to explain satisfactorily what Z is all about. Everything we speak and write seems to generate more questions than answers. Of course, your interest is shown by all this, and we rejoice! Nonetheless, Richard currently expends much energy on Micro C article hoping it fosters increased understanding, fewer questions.

ZCPR3: The Manual and Term3 Status: Yes, manual is shipping, slowly. Richard's book certainly answers many pent-up, so-far unanswered questions. Term3 about to ship...another fortnight and it should be...documentation taking longer than planned.

Software Musings: Zilog Z80 instruction set is so powerful that it's a shame, historically, Intel 8080 common-denominator code writing started and has gone on for so long. Now with HD64180 high-integration microprocessor chip availability, we start to forget 8080 and take full advantage of Z80 (and National NSC800) hardware architecture, especially since **Zas** relocating macro assembler is perfected (and is only \$69.00). Zenith and Viasyn (CompuPro) curse day they chose Intel 8085 (similar to 8080) as co-processor, instead of Z80 or NSC800, in their S-100 bus computers.

The RISC (reduced instruction set computer) concept, fostered by Prof. David Patterson and his University of California at Berkeley (CAL) students and getting coverage by trade press, means little to us here at EI. We use existing hardware power to simplify software and increase computer through-put. Others play their games to break hardware market strangle-holds created by Intel, IBM, et al; we won't!

Long live instructions DJNZ, INC, DNC, INI, INIR, EX, EXX, ADD, ADC, LDIR, SET, RES, SBC, SUB, JR, and extremely versatile LD. And HD64180's MLT, INO, OUTO, OTIMR, TST should prove of great value for compact, fast code production. Instructions **LD (HL),C** or **LD C,(HL)** require only one byte as object code. Load (copy) the contents of memory pointed to (addressed) by register-pair HL into C register, all in one byte! Many useful one-byte instructions exist; two and three-byte ones usually complete our needs for fast-code writing. Seldom do we use four-byte op-codes. On average, two-byte op-codes are required for typical programs, giving 6mHz HD64180 (or 8mHz Z80) through-put of one MIPS (million instructions per second)! Compare with through-put (and with hardware/software costs) of 16/32-bit Intel processors!

Now that we have your full attention, consider: HD64180 double-precision multiply bench mark reported in Z-News 107, pg 3, was obtained using short (54-byte) assembly language subroutine. Listing comes from a yet-to-be-released Hitachi application note. Interesting code works the way we multiply with pencil and paper:

```

; 16-bit unsigned multiply with 32-bit result subroutine

MULTX:  LD      DE,(MEM1)      ;16-bit unsigned arguments previously
        LD      BC,(MEM2)      ; stored at locations 'mem1' and 'mem2'
MLTX0:  LD      H,C            ;use lower order byte of
        LD      L,E            ; of both words for 1st mult
        MLT     HL             ;16-bit product stored
        LD      (RESULT),HL    ; in 'result' location
        LD      L,H
        LD      H,0
        LD      A,B            ;save
        LD      B,D
        MLT     BC             ;diagonal multiply
        ADD     HL,BC
        LD      B,A            ;restore value
        LD      C,E
        MLT     BC             ;diagonal multiply
        ADD     HL,BC
        LD      (RESULT+1),HL  ;interim product stored
        LD      L,H            ;ready to shift second line
        LD      H,0            ; left then add to first
        RL      H              ;rotate left through carry
        LD      E,A            ;original b-reg value into e-reg
        MLT     DE             ;multiply
        ADD     HL,DE
        LD      (RESULT+2),HL  ;final 32-bit product available
        RET

MEM1:   DS      2              ;uninitialized area starts here
MEM2:   DS      2
RESULT: DS      4              ;32-bit product (low-byte first)

```

Twelve bytes are removed if application program places data in BC and DE register pairs before entry to subroutine (call to MLTX0, eliminate MEM1 and 2 references). Execution time: 37.1 usec (microseconds) with 6.144 MHz clock (0.163 usec period), 42 op-code/operand fetches, 3 clock cycles per fetch, 110 machine cycles and 185 states. Recall, Z80 processor took 302 usec (8 times longer than HD64180) to double-precision multiply, lacking MLT instruction.

Ready your order for SB180; call **The Micromint** at 800/635-3355. Incidentally, stand-alone BBS package (see Z-News 206 and 207), using SB180 and COMM180 (with MOSART and SCSI hard disk interface), has been given name of **TurnKey Bulletin Board System**, TKBBS. And glory-be, there's been no price increase! Full disclosure in upcoming communications issue of **BYTE** magazine.

Using ZAS: Universal assemble-link-load is major Zas quality, as well as convenience and speed. Here's a few general rules to follow when assembling an already-written source listing: 1) convert ASM, MAC, and LIB files that use Intel 8080 mnemonics to Zilog with supplied **Zcon** converter and translator. 2) Make sure, by scanning source code with your editor, pseudo-ops don't start in column one but in operation/operand columns, usually column 2 through 32. Column one is reserved for labels, except leading line comments may occupy this column. Normally, pseudo-ops start in column 9,

the first tab stop. 3) Comments start with a ";" (semicolon) and not with "*" (asterisk); neither ASM nor M80 permit other than semicolon. (Unexpectedly, Patrick O'Connell, author of Zas, made present version of Zcon convert leading *'s to ;'s. Thank you, Patrick!) Errors flagged by Zcon during conversion should be fixed before assembling with Zas.

Investigate errors produced during assembly, then fix. First error usually causes many subsequent errors, so fix first then see what remains to be done, if any thing. Always fix next first error of previous assembly.

Typically, changes in source statement form make for error-free assembly. For example, listing pseudo-ops like \$-MACRO and \$+MACRO should be changed to .SALL and .LALL (or .XALL), respectively; M80's .8080 and .z80 statements should be "commented out" (see Z-News 106, pg 1, and 205, pg 3). Of course, all new programs should be written using Zas User's Manual as absolute guide. If ZAS doesn't perform as the manual indicates, fill out EI "Software Update Form" explaining trouble and return to Echelon. Moreover, these fill-in-the-blank forms should be used for program improvement suggestions, for any EI product. We value your advice!

Amateur Z User's Corner: Above Zas discussions suggests a quick-and-dirty alias to assemble converted-to-Zilog files (using Zcon) and link/load to executable COM files.

```
ZAS $1;SAK /bp6 Errors, cancel (^C)?;ERA $1.bak;ERA $1.com;
```

```
ZLINK $d:$1,a:VLIB/,a:Z3LIB/,a:SYSLIB/;ERA $1.rel
```

No harm comes to file being linked if routines from invoked libraries are not needed. Fast **Zlink** is intelligent enough to work quickly under such conditions.

Z-Node Activity: Rea Williams, Z-Node 10, installed a 2400 bps modem and now uses Z-Msg; try him by calling 714/855-0672. Also, Rea ordered a Micromint SB180 single board computer and plans to quickly have it up as his node after arrival in August.

Though not a Z-Node, Norm Feder is a ZCPR3 enthusiast. His BBS--**Lands End RCP/M**--is in Sidney, British Columbia, Canada; dialing 604/656-9115 gets his 300/1200 bps modem. Give our Great Northwestern neighbor a call for a change of pace!

Oh, Happy Day! Z-Node Central up with 2400 bps communication capability, starting today. David McCord, Sysop, obtained US Robotics Courier modem to reduce your online time, your monthly telephone bill! Oh, Happy Day!

Silicon Valley (and other hi-tech regions) **Brief:** Ups and downs, peaks and valleys, chills and fever (see Newsletters 007, pg 5, and 009, pg 7). Many Silicon Valley companies (principally their management) appear suffering from lack of discipline, knowledge, and understanding. Such suffering usually is caused by greed (we, human beings, are yet perfected), aided substantially by short-sighted mental conditioning, lack of significant education (indoctrination, yes). Who knows where we've come from, where we're going? Lacking knowledge, we take what comes.

Technology is no substitute for learning; yet, we seek push-bottom, instant response and gratification! Life is to be lived--physical, mental, emotional life--and from living, higher levels of understanding come, feelings of satisfaction and fulfillment obtained. Those who acquire power without regard for pain caused to others in the process produce exactly what they sow: hostility and anguish! Sleep occurs not only at night for these power-at-any-price holders but during the day. Still, it's during the day consciously directed thoughts and locomotion are needed; anxious, subconscious energy shouldn't control then. Wake-up America, Sun is high in sky! Breakfast, brunch on lush strawberries and white Zinfandel--enter realms of enchantment naturally! See you down the lines...

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+

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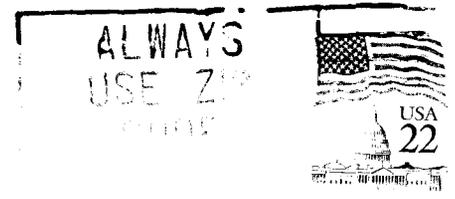
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Z-NEWS 209

Double FLASH: REVAS4 gets Hitachi HD64180 code disassembly capability—price stays at \$90.00! Al Hawley, REVAS (REVerse ASsembler) author and Sysop for Z-Node #2 and ham radio packet to landline network coordinator, just finished Hitachi version. Registered REVAS3 owners may upgrade for \$20.00 plus shipping and handling. Send Echelon your master diskette.

TERM III is shipping—one year in development, planned to take only four (4) months. Program takes advantage of environment created by ZCPR3. Has what you would expect from full-feature communications package plus much more. Term3 represents new thinking about configurability, flexibility, ease-of-use, performance, and modularity.

Z TIPS: VFILER36, VMENU15, and MENU38 trio is released preliminarily. Al Dunsmuir (Scarborough, Ontario) did it again; we thought previous versions were great but latest brings a fine tune to assembly language programming. Forty-four code enhancements were introduced to the trio for: 1) increased speed and quickness, 2) reduced screen rewrites, and 3) increased overall flexibility. About the updates, Al said, "A large effort was made to speed up the loading of VFILER and VMENU, and both VMENU and MENU now are a lot smarter (search for menu file along path, no extraneous returns/checks of Command line status). VMENU now knows about the Command echo flag, and System menus." Read *.INF within respective .LBR files for specific details, on Z-Nodes now. Z community owes Al much gratitude for his extraordinary attention to detail, his continuing concern to establish ZCPR3 utilities best. He next tackles ZEX, making it an improved (and proper) Z-System program!

Dennis Wright, Z-Team Member and author of ZRDOS, has upgraded Ted Emigh's FINDERR to handle ZAS assembler errors. He also created a nifty ZEX file to go with it. The way Dennis wrote batch file, ZEX works without a glitch. Find ZASLINK.ZEX and new FINDERR.MAC—it's Version 1.4—on Z-Node Central and other nodes.

Jay Sage checked out ALIAS for update, calling his screen-oriented version VALIAS, and Richard Conn works on MKALIAS. Therefore, we soon should have two super make-alias programs with internal editors—good times continue to roll!

Rememorandum: Many computerists remain that haven't purchased Richard Conn's **ZCPR3: The Manual**. What's the matter with you estimated 60,000 Z-System users? Bound, typeset, 351 pages, 7.5" by 9.25" size, manual still sells for only \$19.95, plus \$4.00 for shipping and handling costs. Shipping from stock! You need not another source for facts, information, knowledge? Satisfied? Please, think again!

And there's **ZCPR3** and **IOPs** selling for \$9.95, plus shipping and handling, or get the tutorial as a series of files (from Z-Nodes as IOP.LBR) for download phone-time cost. Fifty-page (50) loose-leaf document, written by Richard Conn, explains ZCPR3 input/output redirection philosophy, shows how to modify your BIOS to include I/OP segments, and how to use DEV, DEVICE, and RECORD Z-System commands.

Comment Line: We are encouraged by volume of mail we receive, indicating interest in high-performance 8-bit products, and perhaps, commitment. One problem: we don't have the staff to individually respond to most of your questions.

Your efforts are appreciated; we thank you. Every letter is carefully read and we react with what is felt appropriate. If you haven't received a reply, don't think we didn't receive and read your letter. Consider: it takes, on average, 20 minutes of someone's time to draft a response; that time is worth, with our present corporate overhead, about \$60.00 per hour. Thus each response costs us \$20.00, deeply cutting into profits, profits so dearly needed to continue our developments. (MicroPro, producer of WordStar, offers personalized telephone help at \$90.00 for first hour, if prepaid! After that it's \$2.50 per minute!) Information costs money...

It may be severe but printed material should be read seven (7) times before concluding lack of understanding. Seven times is sufficient to obtain meat! It's a law; from such reading technique, you move from echelon (level) to echelon, increasing insight naturally.

Z-Node Activity: Richard Rodeheaver, C.O.R.E. Z-Node #14 Sysop, advises to use password **RAVEN** when logging onto his Reynoldsburg, Ohio, system. Richard's number is 614/864-2678. Another Richard, Petersen, but in El Paso, TX, has a new node modem number: 915/821-3638.

New 1,024k-byte block transfer YMODEM and KMD programs and 2400 bps modems exhibit increased through-put, reduced stay-time on Z-Nodes. One k-byte blocks instead of 128-byte increase transfer through-put by about 30% with 2400 bps modems, by 9% with 1200 bps. Actual results are determined by error rate of transmission circuit. (US Robotics must make their 2400 modem less error prone or they will be black-balled. The Hayes 1200 is poor enough, we can't live with further reductions in quality. You OEMs listening?)

Echelon recommends temporarily using KMD (renamed to XMODEM, as suggested by its author, Irv Hoff) along with BYE5 on all Z-Nodes, until such time Term3 replaces both.

While on subject of performance, Jud Newell, Z-Node #16, Islington (Toronto), Ontario, CANADA, has all Echelon files and programs online. Both freely distributed ones (non-commercial use) and proprietary items are handled. Jud is a popular software downloader (see Z-News 206) and has special modem number for his node: 416/231-9202. If you need our products, here's a place to download from!

Amateur Z User's Corner: Zas is distributed so assembly produces a REL file, one that can be used for linking with subroutine libraries, like SYSLIB, Z3LIB, and VLIB. (Change defaults by running "install" program.) Of course, REL files become COM files using ZLINK and default code origin of 100 hex. Add trailing "h" to command line to toggle output to HEX. An alias, we call it ZASH, to create COM files from HEX using Ron Fowler's MLOAD program is:

```
ZAS $1 h;SAK /bp6 Errors, cancel load (^C)?;era $1.bak;
era $1.com;mload $1;echo;echo erase hex file created?;
if input;era $1.hex;else;fi
```

Note conditional test of HEX file erasure, in case you wanted HEX file retained for later use. Command line is **ZASH <fn><cr>**. File type (ft) is assumed as .Z80 and must not be entered as part of file name (fn). Such would be passed along with name. "era \$1.bak" would expand to "era fn.ft.bak" and that's not wanted!

Zilog mnemonics are easy—much easier than Intel—to learn, remember, and use. Best example, LD operation replaces five (5) Intel ones: MOV, MVI, PCHL, XCHG, and SPHL. Additionally, LD handles operations beyond Intel's 8080 capability. You quickly learn register, immediate, and memory operand (data to be worked on) notation. Source of data to right of operand comma, destination to left; memory data in parenthesis but immediate and register, not. So think not it difficult to learn Zilog/Hitachi mnemonics, think paths (no pun intended) to efficiency, performance, and speed.

Don't forget that one of the best ways to learn assembly language programming is to disassemble working programs, ones you have source code for! And, we know of no better disassembler than REVAS. Furthermore, REVAS4 handles new, destined-to-change-microcomputer-world, Hitachi HD64180 instructions. (If this were a perfect world, Intel's 8086/80286 would have been upward compatible with 8080/Z80 microprocessor; you know it's not, and it isn't!) Unique REVAS manual (it's over 80 pages) guides you through all phases of disassembly and promotes quick code learning.

For those with limited disk space, David McCord (Z-Node Central Sysop) has advice. "A good solution is the Z3 CMDRUN facility. This allows you to group .COM

files into a library (.LBR) file, where you will not be forced to dedicate storage [either an allocation block or directory entry] for each file, because library files store member files much more efficiently. To set this up, get the LRUNZ3 file in the UTILITY: directory here. Rename the LRUNZ3.COM file to CMDRUN.COM and place on A15:. Then, create a library file of the COM files you want named COMMAND.LBR and place in A15:. You should now be able to invoke any of the COM files in COMMAND.LBR by just entering it's name (e.g., **SHOW<cr>**) at the system prompt, just as though it were not really actually inside a .LBR file. Again, see the ARCHIVE: directory for some more info on the CMDRUN function of ZCPR3." Please don't install (load) any of the four Z3 error handlers if you have CMDRUN.COM along file search path—there's a logical search conflict!

*"The time has come," the Walrus said,
"To speak of many things.
Of shoes and ships and sealing wax,
Of cabbages and kings."*



Public Domain Status of Echelon Software: Questions regarding domain status of ZCPR3 and other EI products are coming in again. Newsletter 103 discussed our position and nothing has changed. Z3NOTE.MSG file on Z-Nodes also gives details of our status.

We are aware that several mail-order, for-profit, companies are offering packaged ZCPR3 software for sale. If these companies don't have a license from EI they are probably unintentionally selling our software illegally. We hope they apply and get on Echelon's team. You can help! Let such companies know that Echelon would welcome signing them up with a license arrangement to sell ZCPR3 (and ZRDOS) software.

Question Anything Not Understood: Computer literacy, for many, appears to stifle thinking, certainly a step backwards, not wanted. Though increased quantity of paper-work always results, quality is something else. It's good to do some things occasionally by hand, add a column of numbers now and then. What we don't use, we lose! And a brain is a terrible thing to put into such category. Z-News 109, pg 3, and 203, also pg 3, let us have it in the teeth—question results, even those produced by computing machines. Understand spreadsheet model's way-of-thinking. We say again (though, at times, we feel we plant daisies in South Pole ice): don't simply be an end-user, be elitist, be best-of-class!

Business Management Character: Subconscious action, if fundamentals of Life are lacking (never learned), leads to human fear (non-receptivity to things new), bogus guilt (self-blame), lack of self-determination (simple re-action), and social detachment (avoiding emotional pain). American big-business produces few individuals elevated to far-sighted-ness, produces few who expend Cosmic Conscious energy. We fall into trap thinking next-quarter profits more important than quality of life (if any) our grand children (when grown-up) will experience. Long live principles of **Silent Spring** author, Rachael Carson, and Stanford University Prof. Frederick Terman!

This Earth is substance more enduring (holy) than all biological life--homo sapiens are but a small aspect of this life. Until each human becomes a sphere, this planet is our MOTHER and FATHER; the only commandment: HONOR! If we honor, all falls/rises into place; else, face survival uncertainty, fi (endif).

See you down the lines...

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Z-NEWS 301

Z TIPS: From Jim Whorton (Wichita, KS), VDO editor author, comes an alias to create flavors of VDO, Version 2.5a, having different defaults. Using POKE&GO technique suggested by Bruce Morgen (Warminster, PA), two or more versions of editor are available with single copy on disk! See Z-News 107 and 109 for WordStar pokes. Alias, call it VDN, in sample command line: **VDN [fn.ft]<cr>**. Command elements of alias:

```
1 -> GET 100 A0:VDO.COM      !Load VDO.COM into memory from declared drive
2 -> POKE 1B17 03;          !Set help level, 01=expert, 02=regular, 03=novice
3 -> POKE 1A5C 00;          !Set insert toggle, 00=OFF, 80=ON
4 -> GO $1                  !Run VDO with any supplied arguments
```

Jim finishes a version of VDO that uses ZCPR3 Environment Descriptor (SYS.ENV, Z3.ENV, and ZC.ENV) for terminal and system definition. Hope he includes recognition of DU and DIR directory reference forms, as well as knowledge of system environment. Coding with VLIB, Z3LIB, and SYSLIB subroutines makes these additions easy. We welcome his fast, memory-oriented editor as a proper Z-System utility.

Jay Sage's VALIAS is big hit--breaks alias-creation/modification bottle-neck! Jay's program permits changing, or adding, individual commands without retyping the whole alias. And it's screen oriented with built-in, in-context help--so easy to use. Rumor has it that Bruce Morgen is tightening the code using ZAS and full Z-80 mnemonics. Meanwhile, Richard Conn's MKALIAS takes a different but just as fruitful path. More about it as it matures. Can't wait to release both alias utilities!

During the same period, Richard has produced a virtual cornucopia of new Z-System programs and updates. Look for just-out LRUN, LDIR, LHELP library utilities using automatic unsqueeze techniques, updates to XD, CRC, DIFF, and more. Also a new set of routines, LULIB, is being added to REL library trio SYSLIB, Z3LIB, and VLIB. Find foursome source code on some Z-Nodes!

Simultaneously, he finished new SYSLIB, Version 3.3, offering many additional routines. Stimulated by suggestions from customer Don Delwood (Columbia, MO), quick Richard developed eighteen (18) computed-GOTO and CASE routines. While at it, he added a Unix-style (ARGV) string parser and several arithmetic IF routines. New routines in Version 3.2 and 3.3 greatly assisted in writing Term3. SYSLIB grows in strength, more to come (Richard still has "libraries" checked-out)!

On subject of libraries, Martin Murray (Austin, TX), author of NULU super library file manager, is said to be making his program a full ZCPR3 utility--hurray!

Be sure to get and try Paul Pomerleau's new VERROR handler. Has built-in WordStar-like editor to alter unexecutable commands on the spot. Similar to ERROR23, but for those with different taste.

So many new utilities support Z-System! It's worthwhile to read what Richard Conn had to say about creating utilities, "I encourage everyone to enjoy their ZCPR3 system, write tools for it, and contribute them to the user community." Read his full commentary in 12 November 1984 Newsletter 009, pg 4.

Z-Node Activity: Three new nodes started operation during fortnight. Chicago suburb (Lisle) Sysop, Ron Stone, Node #5, has 40-megabytes online. Such capacity shares call-traffic with Node #15, Richard Jacobson, in greater Windy City area. Contact Ron (and Z-Msg) by dialing 312/420-1722. Richard's number remains 312/649-1730.

Z-Node #28 Sysop, Stanley London, informs us he is up and running in Aurora (Denver), CO. His mile-high number is 303/680-9825.

Welcome! Marvin Eyre, Z-Node #37 Sysop, is up...plans to expand soon to hard disk operation. Call his Robards, KY, node at 502/521-7011.

You asked for it! You now have it--a compiled list of current Z-Nodes (file Z-NODES.LST)! Sysop name, city, state, zip code, and telephone number will be kept up-

to-date. As RAS (remote access system, more accurate and descriptive than BBS expression; a Z-Node is a RAS) changes occur, we'll update in timely fashion. You help by leaving message if you see inaccuracies in file.

Also don't forget, especially if you use Tandy machines, Jon Schneider in El Paso, TX. Jon joins Richard Peterson (**The Pass Sysop**) to handle traffic in southwest Texas area. His number is 915/592-4976; Richard's, 915/821-3638.

Notice to DISCAT Owners: We found and fixed output-to-printer bug in CATSCAN. If you return your original disk, we update free! This we owe you; it's not an upgrade or enhancement, simply a fix.

Amateur Z User's Corner: New comers to computers expect much more than received, at least on-surface, from their systems. Most want instant productivity increase, gratification, to learn little from potential perpetual experience. Let it be proclaimed: gratification comes from personal accomplishment through work—work that changes, adds to your Being. Frustration over-come gracefully develops extended character, a character tender as a Lotus, tough as a stone. Happiness is path followed, not destination to arrive at! It comes from each achievement being perceived as higher (greater, of more importance) than any previous. So, when things don't go as planned, computer acts against your intentions, relax—study again available material—try again. From such efforts we learn what we don't know, what we are, how computer works, how we fit in! Z-System users are destined to be golden boys and girls of this marvelous decade.



"Within, we find our Eagle!"

three (3)! Drive A contains system utilities and often-used application programs; Drive B holds working data disk with Drive C used for automatic Drive B backup.

More than three drives (logical and physical) simply are needed as storage requirements increase, otherwise making number of files per directory too large (Z supports 32 directories per logical drive). We personally prefer less than 100 entries per user area (directory, DU or DIR reference). VFILER handles up to 72 files per screen display; more than 144 on a directory slows down operations having to switch through three or more screens to cover all files.

Notice the situation represented by menus of MENU.LBR (128k-byte file on Z-Nodes). AC of ZRDOS archives certain files after they chance without operator concern. Of course, Drives A and B are normally logicals of single physical hard disk; and C, high-capacity (greater than 360k-byte) floppy.

From Steven Hirsch (Burlington, VT): those needing help in understanding aspects of ZCPR3 and Z-System should feel free to contact one of our **good-neighbor helpers**. These volunteers are listed in file Z-HELPR8.BBS on Z-Nodes. All are ready to assist pushing you over some hurdle. Steven is an Apple and Z3 expert. His number is 802/658-4793. Try him (and Doug Thom or Kevin McDonald, both Apple experts, at 408/253-1306 and new 408/462-3731, respectively) and other good-neighbor helpers before calling us! They want your calls and letters, too.

Software Bug Reporting: We request that our "Software Update Form" be used for all bug reporting plus suggestions relative to products or services. We simply cannot efficiently comprehend from verbal inputs your requests. The form suggests the information we need to act on your problems and enhancement suggestions. Please!

One More Time: ZCPR3 and ZRDOS programs (Z-System) are not public domain...copyrighted by Richard Conn and Dennis Wright, assigned to Echelon. While we welcome users enhancing ZCPR3 programs (we fix ZRDOS), we are final authority as to acceptability of changes. Procedure for updating: 1) from Z-Node Central (either from direct chat with David McCord or with posted message) obtain permission to work on file, 2) then obtain latest version of program from official area (ZCPR3) of Z-Node Central, and 3) finally, return your updated version within agreed upon period of time, or determine if extension is possible. So much extra work has been caused by some few who have used other than latest versions, or didn't check file out first. Only one version may be active at once! (If your ideas are significant enough to warrant separate program name, then proceed that way.) Understand, Echelon supports these programs with OEM's and VAR's (without which we cannot be in business) and must maintain absolute control. So be it!

From Page One of ZCPR3: The Manual: "In the development of our understanding of complex phenomena, the most powerful tool available to the human intellect is abstraction. Abstraction arises from a recognition of similarities between certain objects, situations, or processes in the real world, and the decision to concentrate on these similarities, and to ignore for the time being the differences."

In addition to explaining over 90 commands, both resident and utility, manual has individual chapters covering online HELP, MENU and VMENU, Shells, VFILER, and DU3. Using ZEX is make clear as well as how to use the four error handlers. Also packed with details on how to install and use Z3...get your personal copy now! Still only \$19.95, plus shipping and handling. We offer a 25% discount to those buying 5-49, 33% for 50-249, and 40% over 249. Shipping from stock! Call 415/948-3820 to order with Visa or Mastercard, or for UPS-COD.

Paradox? Farsightedness and living in the-now go together, is not paradoxical. Planning is a now (present) function. Using what's available presently (created by past thoughts and doings) produces future environment. Detroit auto-industry started with fuel-efficient four-cylinder engines to power their cars, moved to V-8's, and now has returned to four's. Are you going along with crowds and popular movements? Are you learning, becoming what you could be? Are you creating your efficient environment in spite of contrary trends? (Tried California white Zinfandel?) When will resource-conserving 8-bit systems using assembly language coding gain popularity? **IT'S UP TO YOU!** Turbo-four or V-8, the same job gets done; but, one is substantially more efficient, less brutish, more sapient. Homo sapiens, become thrice sapient! See you down the lines...

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Z-NEWS 302

Z TIPS: An obscure and probably little understood feature of ZCPR3 is that of using CMD and SHSET commands. Any program is converted into a shell by using SHSET on it. Command (verb) is used to permit application programs to know how to return to themselves (in addition to being user interfaces, accepting inputs, and executing commands). For example, **SHSET WS<cr>** makes WordStar into a shell and there's no way to get out of it, short of cold booting your machine! Suddenly, CMD walks on stage, lends a hand, and allows you to have your way with computer. Use **SHSET WS;CMD<cr>** as command or alias, then on existing WordStar, CMD runs. Typing **<cr>** at this point exits shell (with ERROR message set, permitting directional flow changes to occur if more commands are on line). Try them, experiment, and see possibilities for improving your environment.

VALIAS is out! Get it from our nodes...Jay Sage did truly remarkable job of making aliases under Z-System easier to create and modify with this utility. His TESTERR program, an alternate to FINDERR, is another for us who use ZAS and the like. It too presently is on many Z-Nodes.

Along the way, Richard Conn has finished (at least for now) our library support tools. New era begins--they run only on Z80/NSC800/HD64180 computers using ZCPR3 or Z-System! LGET extracts files, LHELP processes HLP/HQP files from within library files;LLF lists all files, and LX executes specified COM files in libraries. Tools, on most Z-Nodes, are in file LUZ3.LBR. Richard and Martin Murray (Dallas, TX) work together to make NULU a full Z3 tool!

What makes a ZCPR3 utility (tool) is described clearly on pages of 229 and 230 of the ZCPR3 Manual. Routines in Z3LIB reduce task essentially to a few subroutine calls! Let's get Ashton-Tate (dBASE II), MicroPro (WordStar 3.0 and 3.3), Sorcim/IUS (SuperCalc II), T/Maker (T/Maker III), and Microsoft (Multiplan) to enhance their 8-bit programs to full ZCPR3 tool status! Would you buy them as upgrades to your presently owned versions? We would! Enough said?

WOW! Article describing SB180 and Z-System in September **BYTE** Magazine hit the spot! Thanks to all who contributed to make commentary possible, especially Mr. Steve Ciarcia of "Circuit Cellar." (Eight-bit lives--move over 16-bitters and make space for us!) But wait, there's much more to come; watch remaining from-now-to-end-of-year issues of not only **BYTE** but many other magazines and newspapers.

We Get Letters: From William A. Dunn, Springfield, OR, "I am pleased with the software but was frustrated with your documentation. I am looking forward to the manual which I ordered last week." (Manual was shipped same day we received order.) "Keep up the GREAT work!" commands Alan, Cathy, and Cynthia Foust, Leonia, NJ. And Virgil Cooper, Carpinteria, CA writes, "Gracious Al Hawley responded to my message by phoning this evening... ." Larry Geller, Tokyo, JAPAN, observes: "I noticed that each issue of Z-News is costing you about one dollar to mail...enclosed find check for \$24.00 to help cover those mailings... ." Thanks, Larry, wish more people understood as you!

Paul Naitoh, San Diego, CA, asks, "Do I need a hard disk to enjoy Z3?" No, Paul, as you now know two drives, each with 360k-bytes or more capacity, are needed! Lots of Kaypro 4 folks are enthusiastic users; magazine/newspaper columnists/editors Bruce Morgen (Warminster, PA) and Ted Silveira (Santa Cruz, CA) are two such!

New Policy: You who receive hardcopy version of Z-News and also download it from a Z-Node may notice that download version is available only after you have received mailed edition. Thanks to Rea Williams (El Toro, CA) for instructing us about fairness: those who pay for Z-News should receive it first! Those who obtain it only from Z-Nodes, essentially for cost of phone call, get it later. Phasing set: Z-News node file is behind mailers by up to a fortnight (two weeks)!

Report Card: All books and copies of Term3 ordered have been shipped. These two items were back-ordered for so long...if you have had an order with us for more than three weeks, and haven't received it, please drop us a note. Our records are not perfect, neither are we. Write us if you should have received an order and haven't.

Again we thank you for being patient--the ordeal is over for us, and for you. Never again will we get ourselves into such a helpless position of not being able to control what we were responsible for creating (Frankenstein/monster syndrome).

Amateur Z User's Corner: We repeat Lewis Carroll (Rev. Charles Lutwidge Dodgson, 1832-1898) fragment, from his **Alice in Wonderland** and **Through the Looking Glass** series, because it represents so closely what we do: many discussion levels, abruptly shifting from paragraph to paragraph; but within each, consistency is maintained. These shifts always produce movement leading to creation of mental spiral--never linear, never to be understood as ups and downs, higher or lower, as if climbing or descending a ladder, but rather like soaring over vast multi-dimensional (more than four) territory--observing, feeling, and doing. You are center of attention and producer of motion! Please don't forget what and who you (and we) could be. Act (not react) while re-acting (feeling)!



**The time has come," the Walrus said,
"To speak of many things.
Of shoes and ships and sealing wax,
Of cabbages and kings."**

We wish mad hatter (hacker) would convince his editor to send us samples of (subscription to) their slick Canadian magazine (**Computek**). We may want to place an ad, among other things. Magazine contains a wonderful 8-bit column written by one who cares, feels. Our kind of folk!



"And now ..."

Z-Node Activity: Welcome to mid-state Z-Node #34! Sysop Rod Blackman, Visalia, CA, needs callers. You central Californians let him know what you think of Z-System; 209/739-8303.

Here's a chance to see if community lives: Mark R. Evans, potential Node #33, is having trouble understanding how to get his system up as a RAS. He wants to learn; who wishes to help? If you can offer assistance, contact him at 1720 Utah, San Angelo, TX 76904. Please!

While at it, we might look into Thomas Hill, 200 Oklahoma Street, Anchorage, AK 99504; Richard Driscoll, 400 North 30th Street, Phoenix, AZ 85008, 602/267-0504; and Robert Paddock, Box 167A, RD #1, Summit Drive, Franklin, PA 16323, 814/432-3647. These nodes may need assistance getting up.

Bob Finch, Node #21, our ham radio packet network expert, should have a dial-in line soon; until then, you Los Angeles area hams can contact him by radio for transfers. His call is N5CXB-1, on 2-meter band frequency of 146.745 MHz OUT/DOWN 600 kHz; IN N5CXB, Bob Finch. Other metropolitan area hams, who presently operate packet networks, wanting to tie landlines to radios using Z-Node concept should contact us, or Z-Node #2, Al Hawley, voice: 213/649-3575. One day, when satellite repeaters are available, all Earth will be tied together through Z-Nodes!

Wanting more traffic, Jay Sage installed a 2400 bps modem...try his Boston-suburb Z-Node #3 for Z-System information and to get files: 617/965-7259. Remember, Jay's a full downloader of EI proprietary programs.

WOW! again: Foot put into mouth! Suggesting (in Z-News 209, pg 2, first line) that everyone read material seven (7) times, without simultaneously giving full explanation of why, has been big stumbling block for many. So we deliver details to remove those (mental) blocks; remember, read through explanation (and everything else) seven times:

Readings 1 and 2. Skim material twice, quite rapidly. Use your finger to help your eyes play over words, lines, and paragraphs. Key words and phrases, ideas, and concepts begin to take form. You gain a feeling of the thought-flow, a framework making next step more powerful.

Reading 3. Read material now from beginning, much more slowly and carefully. Pause to re-read and ponder new ideas and deep thoughts. Use dictionary for unfamiliar words.

Readings 4 and 5. Skim over material twice again, but not quite so rapidly as first two times. Let key concepts sink in even deeper. This is a more leisurely skim. Pause at any word looked up in dictionary and make sure you know both basic meaning of word, and its meaning in present context. Sometimes the thought expressed by a particular word or phrase is so new that it's difficult to grasp at once, even with dictionary help! Do not worry at this point. Future readings add clarity.

Reading 6. Now, read material from beginning again with extreme care. Now is the time to really pause, to ponder, to digest, to impress deeply. Try to obtain essential, inner feeling of messages, even though you may not understand them fully or grasp completely at this stage. Try at this point to read material aloud!

Reading 7. It's a slow skim. Somewhere between your leisurely skim and your first careful reading, #3. It is time to enjoy, to bathe yourself in new insights and viewpoints opening up to you...new understanding comes (in next octave)!

There you have it—we do our best to explain. Never think that learning something new, really new, comes quickly or easily. GREAT EFFORT IS INVOLVED! But keep reading even if you think you don't understand—what comes later (down the lines) explains what came before, following natural back-and-fill (smoothing) concept.

Leadership! Who leads and who follows? Bottom of page 5, Newsletter 007, 15 October 1984, we addressed clone-magazines, copy-cats, people with less-than-constructive ideas. Our present observation is: too many editors put out cookie-cutter editions of their publication. The mold is supplied by advertisers, and journal after journal use it! As we scan 30 to 40 publications a month we notice a thread, one of indoctrination rather than education. So few magazines have the staff to even edit a news release much less investigate news and write their own reports. If the release wasn't styled by producer for individual magazine format, it simply isn't run...sad! Oh! how sad! A free press? We wonder what is free in what they generally do...freely leading or freely following?

Clearly our trade journals show little leadership; so many seem detached, unemotional, have little PURPOSE of their own (other than make money as prime goal). They use pre-formed mold to produce their offerings. We are the losers for it, but it's us who allow situation to exist.

Most magazines (but not all) follow standard Madison Avenue criterion for ad space cost, keyed to numbers of paid subscribers. Consequently, subscription prices are low—this results in main source of revenues coming from advertisers! Any wonder who controls magazine contents? Roses don't grow on stalks of clover. When corn seed is planted, peach trees don't come up! Is this observation faulty?

Time to take a stroll, feel cool breeze coming in from the Pacific. Listen to swaying palms and pines in coast town of Pescadero, and there sip some white Zinfandel at Mrs. Duarte's restaurant and bar. See you down the lines...

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4 November 1985

Z-NEWS 306

Heaven Forbid. We are asked to recommend high level languages (HLLs) for application program development under Z-System. We reply, if you must use an HLL (instead of SYSLIB3, Z3LIB, and VLIB), these are best used:

C Language Compilers

BDS C	BD Software, Inc. P.O. Box 2368, Cambridge, MA 02238 617/576-3828	Fastest Execution Good Code Density Non-Unix C
C/80	Software Toolworks 15233 Ventura Blvd. #1118 Sherman Oaks, CA 91403, 818/986-4885	Best Code Density Good Speed Non-Unix C
Aztec C II	Manx Software P.O. Box 55, Shrewsbury, NJ 07701 201/530-7997	Unix C Compatibility Fair Speed Fair Code Density

Pascal Compiler

Turbo Pascal	Borland International 4585 Scotts Valley Drive Scotts Valley, CA 95066 800/255-8008 to order 800/556-2283 for nearest dealer	High Overall Value Interactive Structured Program Development Neither Fast nor Dense Code New Pascal Standard
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Z TIPS. There's over a million ways (literally) to configure and assemble ZCPR3! Standard ZCPR3 implementation (which we use here at EI) contains only SAVE, GO, GET, and JUMP as intrinsic CP (command processor) commands; other resident (in-memory) commands TYPE, LIST, ERA, REN, C(o)P(y), POKE, P(eek), ECHO, IF, ELSE, FI (endif) are in dynamically loadable RCPs and FCPs. Normally, DIR is a transient, i.e., from disk. CCP (console command processor, CP for short) occupies fixed 2k-bytes; but resident packages, each of 2k-bytes, can be loaded when functional requirements demand different commands, e.g., DEBUG.RCP (MU3 as segment) for debugging programs versus more common SYS.RCP. A sysop's RCP is different from RCP loaded for public callers.

Of Cabbages and Kings. Harvest being in barn, November is season of thanksgiving in USA culture. We wish here to reflect on things for which we are grateful. Our life with continuous good health is one; but mainly we focus on you, especially you who are learning while supporting what we do. By name, Marvin Eyre, Dennis Wright, Dave McCord, Kathy Stough, Patrick O'Connell, Robert Doolittle, Al Hawley, Jay Sage, Al Dunsmuir, Charles McMannis, Robert Peddicord, Richard Mead, and Bruce Aschenbrenner.

And Dreas Nielsen, Bruce Morgen, Ted Silveira, Paul Pomerleau, Tim Linehan, Robert Tate, Rea Williams, Doug Thom, Norman Beeler, Norm Gregory, Marilyn Bailey, Richard Jacobson, Terry Smythe, Ed Unrein, Charles Hoffman, Michael Ward, Jud Newell, Armon Tippitt, and finally, Richard Conn.

More could be added, but these few we consciously believe have made possible what we do. Those others get our thanks nonetheless, those workers who do in silence without notice. We know they need not their names listed here. But without them, our species would have long ago perished. We applaud our continued, but certainly uncertain, survival!

Some few WONDER where our drive, courage (?), enthusiasm, comes from. WONDER no more...we work from natural forces...forces flowing through you, from Eternity... forces beyond TIME and space, beyond Mother Earth, Father Time of E.B. White's classic **Charlotte's Web**...forces of LAW, law which cannot be broken but which regulates All...we were vague and general, now vivid and particular because of your energy.

We Get Letters. " ...[disk format] standardization is indeed much needed for 8-bit world. However, no details on formats were given... " declares Mark Sihlanick, Forest, VA. Sorry Mark, we are working on a standards document now, to be published as soon as finished. Z-News 207 wanted to let everyone know we were fostering a few disk formats we feel are best. Hardware manufacturers designing new 8-bit computers should use existing formats, the ones that are best for speed and capacity.

Dale Updegrave writes from Phoenixville, PA, "I find myself looking for your latest Z-News before the two weeks are up...Echelon is more like a club than a business...is interested in supplying more support rather than [in making] more profit." Thanks! we needed that. Dale, our major short-term task is getting you to regard Z-System as we do; profits come from aspirations, attitude (see newsletter 009, pg 7, to know an aspect of our business).

Z-Node Activity. A warm welcome to new Z-Node #44 and Sysop Robert Gear. Bob's Phoenix, AZ, number is 602/279-2762 and is a first for us in Arizona. He is interested in ham radio packet networks, as are other noders Bob Finch and John D'Ausilio. Also, Bob's "Doktur's" node serves as central for despending medical information.

Ed Unrein wants more non-local callers. His RAS in beautiful central Florida is a wonderland in itself: 305/295-0844. If you can't travel there, you still can telecommunicate (one-day, teleport!).

Amateur Z User's Corner. Logging into a directory may be done two ways. 1) Default log-in occurs when performed from command line, and 2) current log-in occurs when performed from within application programs; on returning to command line, default disk/user area is returned to, shows. Current can be made default by declaration, e.g., in VFILER CMD scripts, command clause "%d%u;" makes current directory the default. While within VFILER, default is shown when "Z" letter-command is given and command line prompt shows at lower left of screen. Current always shows at upper left, either from Files or built-in Help screens. Of course, current and default simultaneously may be same directory.

When dealing with other than Z-System application programs, determine if application uses current (most don't) or only default directories. Then, write your macro command lines accordingly.

Notice, in Z-News 305, bottom of pg 1, selective use of current disk/user "%d" and "%u" and actual drive letter ("a" therein) designation was required to freely move from directory to directory from within VFILER, to have WordStar and The WORD Plus function correctly. When using with such application programs, advanced features of Z-System are absolutely required for full automation and resource-utilization efficiency. Unix and PC-DOS do not have these features.

Technically, for you budding hackers, default directory is contained as two nibbles at location 04 of Z-System Page 0, memory space 00 to FF hex. Current is stored locally within ZRDOS buffer area.

Our shells with their powerful user interface have made concept of current versus default important. Principle under vanilla CP/M was little developed, not much thought of. Remember what user areas were like before SWEEP—they were simply not used! SWEEP, DISK7 started the ball rolling for FILER, VFILER, MENU, FRIENDLYtm, and VMENU. We now have better flexibility than PC-DOS or Unix!

Recap: default (some call it home) directory is the one shown by operating system prompt. Application programs and utilities may move from default by internal command (log-in to new directory, called current) but default is not changed, unless changed at command line prompt, or by declaration in a macro command.



"...and my current became default."

Z-System C O M M A N D S

Frequently used commands are briefly described here. Online HELP facility gives full details of these and remaining commands. At Z command line, immediate usage and syntax help is available (if information is appropriate) by typing <command> //<cr>.

AC Archive Copy copies files from one location to another with verification option, while setting file archive attribute. Only changed files need be copied.

(V)ALIAS The (V)ALIAS utility is used to create an Alias file and to display its contents. An Alias is essentially a text script, expanded and resolved (with parameter passing) when the Alias program is run. Very complex command lines, complete with Flow Control (IF), can be included within an Alias.

ARUNZ Extended command processor used to execute aliases within ALIAS.COM files.

CD CD permits going from one directory to another, simultaneously running environmental file (ST.COM) to establish the desired conditions in a directory. CD may require password to move to new directory.

CLEANDIR Removes de-allocated references to files in the disk directory track area, sorts the existing files in ascending or descending alpha order and packs the names together. Used often nearly guarantees successful UNERASE.

CMDRUN Default name for extended command processor used, e.g., to execute COM files from COMMAND.LBR file.

COMMENT Once entered all text typed at keyboard is ignored by operating system. Useful to output text to printer while not having the computer attempt to act on it, and in local area networks (LANs). Special "COMMENT>" prompt provided.

COMP Compare two files displaying byte-for-byte match and difference. Split-screen display, showing match, differences, in both hex and ASCII, eases comparison.

CPSEL Selects one of two consoles and one of four printers known to system, and line and page length, and whether form-feeds are available. Used by PAGE and PRINT.

CRC Runs a Cyclic Redundancy Check on specified files, optionally creating a file of the values. Useful to make sure files are identical.

DIR Sorted default or declared directory files with sizes (lengths) and disk space used and remaining are displayed on console with this command, by file name or type. Displays directory name, if one, and PUBLIC files in directories.

DFA Display file attributes: read-only, read-write, archive, wheel byte write-protected, etc. Wild card file declaration permitted.

DU3 Disk Utility provides full screen-oriented direct disk editor features. Four screens of command information are internally available by typing "?".

ECHO Text entered at the command line is typed to screen without the operating system acting on it. Useful to display messages from Aliases and between commands of a multiple command line.

ELSE The ELSE command is FCP-resident and toggles the Flow State. If the current IF condition is TRUE, ELSE toggles it to FALSE, and vice-versa.

ERA The ERA utility is used to remove (de-allocate) files from disks. It is resident in either the RCP segment or in the ZCPR3 CCP module.

ERASE The ERASE utility is the transient counterpart of ERA. It is more powerful than ERA, containing many more options and features.

(V)ERRORn Five error handlers dynamically installed by entering their command name. VERROR and ERROR2 are screen oriented; recovery from a non-executable command in multiple command lines is handled gracefully and quickly.

ERRORX The current error handler is disengaged with this command.

FI FI is an FCP-resident command which terminates the current IF. FI is the same as ENDIF in concept (there is no ENDIF command in Z-System).

FINDF Searches for declared files in all user areas and disks in system. Wild card (? and *) and multiple file names permitted.

GOTO Unconditional branch in ZEX files; used in flow-controlled loops.

HELP The HELP command provides online documentation. Typing **HELP ZCPR3** or **ZRDOS1<cr>** brings a menu of commands to peruse, covering all aspects of Z-System operation. **ZRDOS:** and **ZCPR3:** **The Manual** are used for further information.

IF IF is an FCP-resident command which tests a condition and sets the Flow Control State to True or False. If the Flow Control State is False, only FCP-resident commands are executed with all other commands skipped.

LX Run executable files from within library of files. Other library support utilities: LGET, LHELP, and LLF.

MCOPY MCOPY copies files to and from directories. It provides an easy way to back-up files. (CP from an RCP also copies and optionally renames files.)

(V)MENU These are menu subsystems under ZCPR3. MNU and VMN menus are created with your editor following rules detailed in HELP file system.

MKDIR Named directories are created with MKDIR. Any Disk or User Area can be given an up-to-eight-character name. An access password is optionally permitted with each named directory.

MU3 Memory Utility provides direct local memory (RAM) editing. Useful to observe immediate changes to selected areas of memory.

NOTE Similar to COMMENT, but without special prompt and active for only one line. Text typed is not acted upon by computer.

PAGE The PAGE command sends text files to CRT console screen for operator viewing. More than one file may be viewed sequentially, skipped, with screen wordwrap if line length exceeds screen width.

PATH Allows display and dynamic change of command-file search path.

PRINT The PRINT command provides full page printing of text files on the printer. CPSEL selects the printer characteristics. Page heading and numbering, and sequential file printing, with wordwrap, are available.

PROTECT Files are declared Read-Only, System, or Read-Write, singularly or in wild-card file groups, with PROTECT.

PUBLIC Utility to declare directories global, files accessible from any directory.

PWD The PWD command Prints the names of available Working Directories.

QUIET Entering QUIET reduces text output from certain crucial utility programs, CD, LDR, LX, PATH, REG.

REN Renaming files is performed with resident REN or with the more powerful transient RENAME.

SAK Strike Any Key is interactive glue, used in command lines to suspend execution for a specified time or cancel next operation, alert operator with console bell, cancel, or if operator not available, proceed after delay.

SFA Set file attributes: read-write, read-only, archive, wheel byte write-protected, etc. Wild card file declaration permitted.

SETFILE Allows declaring up to four system file names to be used with shell programs, MENU, VMENU, SAK, ALIAS, etc. SHOW indicates system files active.

SH Model shell program ready-to-use; internal commands are: ? for help, SHCMT for comment entry, SHECHO for message text echo, and SHEXIT for exiting the shell.

SHCTRL Shell Control permits getting out of a shell, i.e., popping the stack.

SHOW SHOW prints a menu of options to permit recalling the status of the ZCPR3 environment. Buffer address locations, command line length, system cpu speed, maximum drive and user areas permitted, all on 11 screens of information. **SHOW E<cr>** installs Show as an error handler.

SHSET Makes any program into a shell; useful to control application program usage.

UNERASE The UNERASE command permits recovering accidentally erased files. Recovery must be made before starting any further disk drive activities.

VFILER VFILER is Z-System screen-oriented file manipulation utility. Permits pointing to files in directory and performing operations on them: compute lengths, view, print, copy, delete, unsqueeze, or tag (wild cards allowed) for group (mass) processing. Ten macro commands from custom CMD menu, new CMD per directory possible.

VTYPE File scanning utility permits forward and reverse text viewing with controlled scrolling rate, string searches, quick goto bottom and top of file movements, etc. Fully screen oriented with built-in in-context command help.

WHEEL WHEEL permits changing the system from secure to unsecure. If secure, passwords are needed to access established directories and certain utilities may not be used: ALIAS, MKDIR, PUBLIC, etc. The preset password is SYSTEM.

XDIR The XDIR command is most powerful of three supplied file directory listing programs (transients). Optionally shows all files in all directories (normal and public), vertically or horizontally sorted by file name or type, to console, printer, or file. Negate wild-card search and directory-to-file-buffer for directory comparisons are unique features.

XIF Exit (terminate) all pending conditionals (IFs) in flow command testing. Useful in ZEX GOTO loops.

ZEX Extended command processor for versatile multi-command/program batch processing; interactive, user-prompts and message displays.

#*****#

Quack Separated From Duck. We WONDER who will be first to use Wyse WY-350 color ASCII terminal to upgrade WordStar into a multi-hued word processor. With a little software modifications to the program buffer area, color could be used to indicate status of text entries and changes. Different shades could represent 1) original text, 2) moved text, 3) newly inserted or added, 4) bolded or shadowed, 5) underlined, 6) font style changed, 7) text copied from or written to another file. We can think of many other enhancements that would be valuable to console operators using PropStar (see Z-News 304) to post-process WordStar files into a laser marking machine.

How do we overcome, justify cost of color terminal?

Straight-line drawing ability of modern ASCII terminals, monochrome or multi-color, permits sharp, graceful menus to be formed—we simply haven't taken advantage of graphics, yet. And sadly, vast crowds these days go only for bit-mapped monitors. We WONDER why!

MOSART. November BYTE MOSART (modem synchronous, asynchronous, receiver, transmitter) article gives an idea of where telecommunications is going. TurnKey Bulletin Board System of Micromint, Inc., (see Z-News 207, top pg 5) uses this hybrid module, and includes Z-Msg, Term3, and Z-System to do software chores. Read TKBBS description in December BYTE. Call or write Xecom, Inc., 374 Turquoise St., Milpitas, CA 95035, 408/943-0313) for prices and literature describing MOSART module.

FLASH. S-100 board using Hitachi HD64180 high-integration chip announced by Magnum Digital, Inc., Route #2, Box 223, Stover, MO 65078, 314/377-4419. Unusual (perhaps unique) CPU board may be either master or slave in multi-user/processor system. On-board are two serial ports, 64k to 256k-bytes of static CMOS RAM, but co-board extends to 2 megabytes, I/O port drop-out timer for fail-safe operation, bus controller for multi-processing, and many more features. Priced at \$469.00 with support software; call Mr. Dion Vaugh, MDI President, for additional details.

Industry Brief. Five (5) Japanese companies are currently sampling one-megabit DRAMs; Hitachi, Toshiba, NEC, Fujitsu, and Mitsubishi. The sixth, Oki Electric, starts next month. Toshiba has licensed Siemens (Regensburg, West Germany) to produce their design. (Remember, you read it here first.) Many British people say, "We will not change our life style to compete with Japanese industry." We say to these, "Your life style can only be maintained if you adapt to your changing environment. World is effectively smaller and more accessible now than when you were philosophically (politically) Number One." What do USAians say? Let's hear from matter releasing energy, from s-u-b-s-t-a-n-c-e moving towards e-s-s-e-n-c-e!

By the Way, third force of triad active in Cosmos, in case you still WONDER, is represented by instability. This force is like a wedge applied at a tangent, never orthogonally, near an object's base. Such directed energy permits, causes local and Cosmic change (see logo/eagle discussion in Z-News 303, pg 5.) Anyone care to label this particular force? Historically, it's been called by many names!

Now we taste Zinfandel wine and hear zydeco music, that marvelous mixture of French, Cajun, Creole, Celtic, and African rhythms. Real people-music, this zydeco! Brought to our attention long ago, we believe in 1953, by Clifton Chenier (king of the music), but made popular by Ida Guillory (Queen Ida). Chris Strachwitz, of Berkeley radio station KPFA fame and founder of Arhoolie Records of El Cerrito, CA, 415/525-7471, records and produces zydeco pressings and tapes for sale. It's our bon-temps-roulet music, along with music of Polish rebel Frederic Chopin. Zinfandel is native California. See you down the lines...

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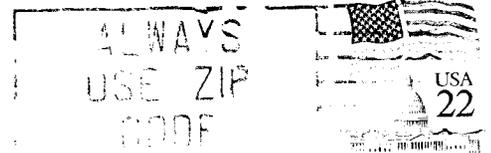
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18 November 1985

Z-NEWS 307

Z TIPS. PUBLIC ZRDOS Plus, the only DOS, Version 1.2 (Item 12 on EI price list), we currently offer, comes with many useful utilities; DUMP and MOVE are two. DUMP is a screen oriented file display program showing both in hex and ASCII. Trailing options permit line addresses relative to 100 hex, sending display to printer, pause after declared number of sectors are shown. Any keypress continues the display for next set of sectors. Ideal for us is `DUMP fn.ft /p2m<cr>` which displays two sectors (a screen full) showing the addresses starting at 100h. DUMP is a modern utility in line with rest of Z-System tools, in vain of COMP, our file comparator.

MOVE, Z-System utility written by ZRDOS author, Dennis Wright, as were DUMP, VTYPE, COMP, and others, is handy even though PUBLIC directories are available. Files are moved from area to area on the same drive, and moved quickly! MOVE permits wildcard filename declarations and also directory DU and DIR forms.

ZRDOS Plus comes with above four utilities plus VTYPE, the absolute best file scanner we've seen (see Z-News 207, middle of pg 1); PUBLIC described in Z-News 305; VIEW, earlier file scanner; and DFA and SFA, display and set file attributes, covering all available bits, archive, wheel-byte write-protect, read-only, etc.

Two screen-oriented command-line editors are currently available. VCED (video command editor), Version 1.1, written by Paul Pomerleau (Chicago, IL), permits editing, executing, and recalling commands lines, both present and previous. Uses subset of WordStar cursor commands (like VERROR and TALIAS), plus many more, to move from command to command, undo erased commands, recall previous command, etc. Screen oriented and a Z-System utility, it knows about paths, DIRs and DUs, and ENV files. A neat VCED support program, WAIT, toggles "Strike Any Key" prompt to hold screen display, as desired, before returning to editor.

Paul has also finished his version of ALIAS, called BALIAS, to join other alias generators and editors (VALIAS and TALIAS) in the stable.

HSH (command line History Shell), Version 1.1, comes from Michael Rubenstein, Galveston, TX, and carries command-line editing to elegant heights. Similar to VCED but with a different flavor. Designed to be used primarily with RAM or fast hard disks and written in C Language, HSH, is 8k-bytes long. Comes with Z-System HLP file; it's one nice tool! On Z-Nodes, everywhere.

Wilson Bent (Fair Haven, NJ) has made an interesting contribution with his LDSK named-directory program. By using leading dash in a file name the directory becomes that name. Try it—you may find LDSK to your liking, especially if you're

"...never be without your tools."

floppy-based. Compare with MKDIR described below...many ways to de-scale fish!

Our cup overflows, cornucopia! Thanks, all, for your programming activities.

We Get Letters. Yes, we erred in Z-News 304; WSPATCH is still useful even if running PUBLIC ZRDOS. It's quicker to use WSPATCH for numerous different terminals than to re-install using MicroPro INSTALL. Thanks to all for pointing this out.

"Your Newsletters and the BYTE articles on the HD64180 rekindle my interest in expanding my knowledge of Assembly, ZCPR3, etc.—even though all this is likely to be



of little practical use to me." Edward W. King, Ithaca, NY, writes of his stimulation and doubt. Ed, any knowledge can be put into practice. Knowledge acquired from ZCPR3 activities goes a long way to making one feel fulfilled. Such work always pays coin.

From James Coutts, Sunnyvale, CA, "I am running CP/M and am trying to resist MS-DOS." What's to resist? There's so much to be learned, if you get past surface barrier, from capabilities of 8-bit machines. Using and studying Z-System opens learning portals wide.

Z-Node Activity. Central had first birthday (10 October)! One year old, Z-Node #1 Sysop, David McCord, has enlivened high-performance 8-bit computing. His substantial leadership produces light when there is near darkness. Dave, keep your beacon on.

All Z-Nodes carry tremendous traffic loads—we thank each sysop for extraordinary efforts on Z-System community's behalf—what a constructive team! Individually each of us receive as we give, occasionally receiving seven (7) fold. Coming year holds much opportunity for hard-working teams!

Amateur Z User's Corner. MKDIR is used to create and modify named directories. Though **ZCPR3: The Manual** (pages 65, 244, 299) is somewhat vague about doing this, MKDIR's complete built-in menus and prompts make using it easy and fast. After typing **MKDIR<cr>** at command line, enter ? (or /) at tool command prompt to obtain main menu:

```

MKDIR Command (? for Help)? |
MKDIR Commands are --
    C - Change Directory (Add/Rename/Delete Entries)
    I - Initialize Directory
    P - Print Directory
    R - Read Directory
    S - Status of MKDIR Environment
    W - Write Directory File
    X - Exit Program
MKDIR Command (? for Help)? |

```

First thing to do, if modifying an existing NDR file, is read file into auto-allocated buffer space provided and then display contents, R followed by P command. After entering R, choose name of NDR to edit or create. The default is NAMES.NDR. We distribute a sample NDR file with name of SYS.NDR. If updating this file and if it's located in A15:ROOT directory, then enter **A15:SYS.NDR<cr>** as requested name at R command prompt.

After entering P and seeing what you already have as names associated with disk/user areas, enter C to alter. And press ? (or /) for this screen:

```

MKDIR Change Mode --
    You may issue the following commands at this point:
    DU:dirname    <--- Create/Rename DIR Entry
    DU:           <--- Delete DIR Entry
    <RETURN>      <--- Print Directory
    X            <--- Exit [leave Change Mode]
    ?           <--- Print this Help
Directory Entry (?<RETURN> for Help)? |

```

Establish disk A, user area 6, with name of "private" by entering: **A6:PRIVATE<cr>**. Next, prompt asks for optional password, up to 8 characters, to access directory.

You take it from here...create and load (using LDR.COM) several trial NDR files to gain experience (and confidence) using named directories. After, you are ready to write ST alias files used by CD (please, read pages 23 and 24 of Z3 Manual). Are you ready? Can you sense this long-expected moment, never-to-be-repeated opportunity?

Z-SYSTEM GOOD-NEIGHBOR HELPER (GNH) ROSTER

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Anyone wishing to assist new ZCPR3/ZRDOS users and potential users please send us your name, address, expertise, and telephone number.

```

* * * * *
*   Full ASCII Character Set   *
* * * * *

```

0	00h	NUL	^@	32	20h	SP	64	40h	@	96	60h	~
1	01h	SOH	^A	33	21h	!	65	41h	A	97	61h	a
2	02h	STX	^B	34	22h	"	66	42h	B	98	62h	b
3	03h	ETX	^C	35	23h	#	67	43h	C	99	63h	c
4	04h	EOT	^D	36	24h	\$	68	44h	D	100	64h	d
5	05h	ENQ	^E	37	25h	%	69	45h	E	101	65h	e
6	06h	ACK	^F	38	26h	&	70	46h	F	102	66h	f
7	07h	BEL	^G	39	27h	'	71	47h	G	103	67h	g
8	08h	BS	^H	40	28h	(	72	48h	H	104	68h	h
9	09h	HT	^I	41	29h	)	73	49h	I	105	69h	i
10	0Ah	LF	^J	42	2Ah	*	74	4Ah	J	106	6Ah	j
11	0Bh	VT	^K	43	2Bh	+	75	4Bh	K	107	6Bh	k
12	0Ch	FF	^L	44	2Ch	,	76	4Ch	L	108	6Ch	l
13	0Dh	CR	^M	45	2Dh	-	77	4Dh	M	109	6Dh	m
14	0Eh	SO	^N	46	2Eh	.	78	4Eh	N	110	6Eh	n
15	0Fh	SI	^O	47	2Fh	/	79	4Fh	O	111	6Fh	o
--	----	----	--	--	----	--	--	----	--	----	----	----
16	10h	DLE	^P	48	30h	0	80	50h	P	112	70h	p
17	11h	DC1	^Q	49	31h	1	81	51h	Q	113	71h	q
18	12h	DC2	^R	50	32h	2	82	52h	R	114	72h	r
19	13h	DC3	^S	51	33h	3	83	53h	S	115	73h	s
20	14h	DC4	^T	52	34h	4	84	54h	T	116	74h	t
21	15h	NAK	^U	53	35h	5	85	55h	U	117	75h	u
22	16h	SYN	^V	54	36h	6	86	56h	V	118	76h	v
23	17h	ETB	^W	55	37h	7	87	57h	W	119	77h	w
24	18h	CAN	^X	56	38h	8	88	58h	X	120	78h	x
25	19h	EM	^Y	57	39h	9	89	59h	Y	121	79h	y
26	1Ah	SUB	^Z	58	3Ah	:	90	5Ah	Z	122	7Ah	z
27	1Bh	ESC	^[	59	3Bh	;	91	5Bh	[	123	7Bh	{
28	1Ch	FS	^\	60	3Ch	<	92	5Ch	\	124	7Ch	|
29	1Dh	GS	^]	61	3Dh	=	93	5Dh	]	125	7Dh	}
30	1Eh	RS	^^	62	3Eh	>	94	5Eh	^	126	7Eh	~
31	1Fh	US	^_	63	3Fh	?	95	5Fh	_	127	7Fh	DEL
==	====	====	==	==	====	==	==	====	=	====	====	====

Legend: h = Hexadecimal; ^ = CTRL (Control Key), except 94 = caret and 30 = <CTRL-caret>.

- Notes:**
1. To obtain codes 0 to 31, console Control Key is pressed while simultaneously pressing Letter Key, e.g., <CTRL-G> is ^G, the bell character.
 2. Control Key subtracts decimal 64 (40h) from Letter Key pressed.

Ramblings. (We don't do what we think we must, but what we must; that written is less important than that not.)

You've read and heard of robots (maybe seen or even used one), drones, and cyborgs (cybernetic organisms). It would be surprise to find we were actually one of these. But think, what makes us what we are? It's not flesh and blood, bone and skin, or overall form. Sure, these are aspects of what we are, but there's more. What constitutes the Whole?

Ponder mass of data and information we presently have access to. If you live in a large city, your local public library has more books than you could read in a hundred lifetimes. One of these days soon, all this printed matter could be in computer memories, perhaps be readable with your personal computer. But neither data nor facts count for much unless you have means to interpret into knowledge and understanding, get to the whole. We predict "desktop publishing" mostly adds quantity to printed-text equation, does little for quality, depth and breadth, does little for substance. Unless we, individually and as a species, take a longer view of existence we simply march in-place; each octave overlays exactly the previous. You know Being, living, and learning rests squarely with you and me. Manikins we be not!

Is not the same alphabet used to form words, sentences that praise as well as damn? The octave-oriented musical scale provides for production of sound-combinations to make us both rejoice and weep. For every good there's a countering evil—yin, yang; substantial universal stability in Cosmos. Third Force, neither female nor male, we think of...for every student there already exists a teacher. From knowledge, let's rise to next level of understanding.

You, think quality not quantity...each action, each thought has profound local and Cosmic consequences. Waste not a moment with thoughts of greed or hurtfulness. We humans are still quite coarse, with much to be refined. Let's get on with our mutual task of learning! Be not paralyzed, but be on the Way to deep living, a norm of all Life; this alone wears well.

We camp currently on a mountain top to pen these ramblings. We live at home, though like a traveler on the road...find many things that each day teach us. Fools there are that think their El Dorado is anywhere but where they live. But who keeps book on such folly. We're here searching for that seemingly lost, to change our mood, to taste of water turned into wine from stone...

From light and darkness, strength and weakness; heaven and hell, truth and falseness, real and unreal; from the crown of thorns and the bed of roses, from the depths of agony and the heights of sublime joy; from hate (both positive and negative), destitution, despair, and destruction and love, faith, hope, and construction: we offer a document we want you to own. We cannot give it to you (though we wish we could); you must have worked for it. Thus we charge money, money which represents (see Z-News 305, all of pg 5) your past time and effort (labor, energy). The document, a pearl of great prize, is economy-priced at exactly \$100.00. But we return half your money if, after reading it seven (7) times as detailed in Z-News 302, top three-fifths of pg 3, you feel it not worth amount paid. Make no judgments, simply read as detailed in 302. Think! can you do these two things: read seven times and not judge. If so, order **WONDER: Lesson Learning** to receive something we trust you absorb and retain.

WONDER is not for everyone—only for those who are dissatisfied with present ways of looking at, seeing things—is for those who are anxious to learn new Ways, to discard unsatisfactory. Please, do not order WONDER unless you expect the unexpected...think thrice before ordering. See you down the lines...

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**Z-NEWS 308**

HD64180 Computer News. XL-M180 S-100 board, by Intelligent Computer Designs, does-it-all. It's a complete single board computer with 512k-bytes DRAM, tape, floppy, and hard disk controller, local area network, and more. Write ICD at 9252 Garden Grove Blvd., Garden Grove, CA 92644, or call 714/638-3622, to request literature.

Magnum Digital, Inc., opens new marketing headquarters at 3211 S. Providence Road, Suite #302, Columbia, MO 65203. Call 314/449-7199 for information on their S-100 master/slave computer (PRO-180), disk controllers, and memory boards. Mr. Marc Strid, Marketing Manager, is ready to answer questions and dash literature to you.

MDI's and ICD's products open new era for S-100 bus, multiprocessing, multi-tasking, and multi-user technology.

Bruce Morgen, erstwhile computer editor for **Electronic Products** magazine and present **User's Guide** Advanced User columnist, places newsletter yoke around neck...his NAOG (North American One-Eighty Group) signals bend in road...eight-bit computing systems shall never die! Those of bigger/more-is-better mentality cannot not stop us...deep-living alone wares well. (No-think leads to vegetable-like sleep, plight of some popular magazine editors with neither focus nor long-sightedness.) Whoopee! Subscription to NAOG newsletter costs \$15.00 per year, 12 issues. To order: write NAOG, P.O. Box 2781, Warminster, PA 18974, or call 215/443-9031. It's a must if you own Hitachi HD64180 8-bit computer, either S-100 or SBC. Others, especially PC-DOS users, wouldn't find NAOG interesting unless they are thinking of upgrading...

ZCPR3 Game. The first game available, to our knowledge, using full Z3 environment (doesn't run under CP/M) is called **THELLO**, is being offered by Tiger Computing, 8372 Morris Road, Hilliard, OH 43026. It's interactive, between one player and computer or between two players, with goal of acquiring more blocks of space (pieces) than opponent. Three levels-of-play are selectively provided. You gain as opponent loses—lots of dramatic who-is-ahead reversals as game progresses. Program makes use of screen half-intensity, cursor positioning, and 8-bit computer speed. Very impressive!

Demonstration of game playing against itself is on Z-Nodes in file **THELLEDEM.LBR**. Simply download, install as Z3 utility using **Z3INS**, and enjoy some of what can be—then, for fun, order your fully playable copy. Presently supplied only on 8" SSSD disk, **THELLO** costs a mere \$10.00 plus \$3.00 shipping and handling from TC.

Z TIPS. Creating a complex, long macro (multiple) command-line alias is quick and easy if correct tools are available. Z-System has such tools. First, load **VERROR** (or **ERROR23**) followed by **HSH** (or **VCED**), then run **BALIAS** (or **VALIAS**) under **HSH**. Next, key-in your long set of commands, editing as you observe typos. Execute the alias from within **HSH**; **VERROR** notifies of unexecutable commands. Alter command text on-the-fly from within **VERROR** noting changes that work. Last, re-execute, modify until each command, entire alias, runs as intended. Wow! Of course, same technique may be used to develop **ZEX** batch command files, or **ARUNZ ALIAS.CMD** files. We challenge PC-DOS and Unix users to compete in such interactive automation feats.

Command error handling, full-screen multiple command-line editing with present and previous command recalling (up to the last 100 commands executed!), full-screen creation of aliases consisting of alias nesting, multiple commands with extensive variable passing, including current directory. Again, wow! Yet, many magazine editors claim, fugue-like, there is nothing new to report from 8-bit microcomputing world—we **WONDER** why they think such non-sense.

Our Z-Node network is estimated to be handling over 35,000 callers per month. We get words out about what we are doing, notwithstanding a popular press inclined to ignore our community. Day soon comes when high-performance 8-bit systems are publicly proclaimed for usefulness, speed, and efficiency.

We Get Letters. Newsletters 006 and 301 discussed machine resources required to support Z-System. Some few of you seem to think we think Z cannot be used on systems smaller than a pair of 360k-byte floppy drives. Not true! More power to those who arrange their resources to use but two 191k-byte drives and still get their work done. Bravo! We are fully aware of performance provided by big RAM and fast hard disk drives; but these devices are not necessary to gain substantial increased-productivity benefits from using Z-System. Many ways to open oysters...we salute diversity of thought, which always leads to improved technique. You know we stand against trooping (see Zeffirelli in 304). Daniel Brogan, a professional writer, tells how he uses 191k-byte drives, in file Z-ON-A-2.TXT on Z-Nodes everywhere.

Z-Node Activity. Welcome to Z-Node #45 and its sysop, Richard "Ken" Reid, in Houston, TX. Dick's Altos computer modem number is 713/937-8886. He fills Z-System need in the great southwestern section of USA, reducing load on our El Paso nodes.

Z-node #41's modem number is 301/254-6277. Its sysop, Larry Mansfield, in Baltimore, handles traffic at one end of Maryland, while John D'Ausilio in Bladensburg handles other end, 301/779-7986. State is covered!

Amateur Z User's Corner. Object code and source (ASCII) code are different according to purpose. Object code uses the full 8-bits of a byte, needed to control computer's processing unit registers. Assembler mnemonics (ASCII 7-bit) are converted (language translated) to machine operation code for register manipulation, getting the work done.

A word processor or editor program usually produces ASCII 7-bit code, except for programs like WordStar that uses the 8th bit (MSB, most significant bit) for soft-hyphen, etc., indication.

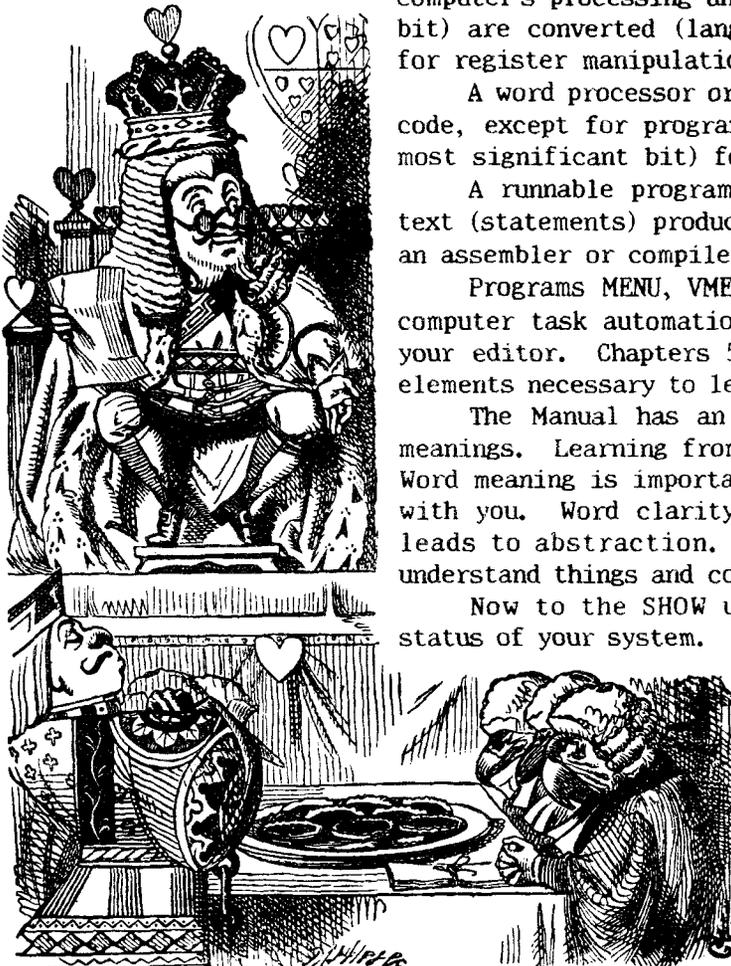
A runnable program is one that's been converted from lines of text (statements) produced by you and your editor to object code by an assembler or compiler.

Programs MENU, VMENU, ARUNZ, and VFILER process text files for computer task automation. You create MNU, VMN, and CMD files with your editor. Chapters 5 and 7 of **ZCPR3: The Manual** describes the elements necessary to learn menu and command file creation.

The Manual has an excellent Appendix with a glossary of word meanings. Learning from this glossary increases your understanding. Word meaning is important—it's the only way we have to communicate with you. Word clarity leads to phrase and idea clarity. Clarity leads to abstraction. For without abstraction we are unable to understand things and communicate complex thoughts.

Now to the SHOW utility...it shows important addresses and status of your system. Page 86 of **The Manual** describes much of what you need to know about SHOW. The base addresses of all segment packages (RCP, FCP, ENV, NDR, etc.) and buffers are displayed. Completely menu driven, 11 screens tell of message status (error, ZEX, etc.), shell stack condition, named directories, paths, full-screen memory content reporting, system file names, CRT and printer data. Everything you wish to know about your running ZCPR3 system is available from one of SHOW's menus. A correctly running SHOW is a good indication, in addition to providing so much

information, that your entire Z-System is installed correctly. Don't forget, SHOW can be installed as an error handler, useful during system debugging.



"Pray, your Majesty, let our teacher quickly appear as we need him."

Z-MSG Message Handling Program greatly expanded by author, Tim Gary, but keeps compact size (only 26k-bytes). Newsletter 009 has our last words about Z-Msg. Version 1.31a handles all popular real-time clocks and does more; for example:

- o A special ZCPR3 ONLY addition allows the sysop of a ZCPR3 system an extremely flexible method of running other programs from Z-Msg command mode. Any number of commands, including parameters, may be used for various user-type access setups.

- o An advanced user edit command facility has been added with these features:

- . "Sweep/Disk7-like" operation allows System Operator (sysop) to quickly step through the users file, and edit, delete, or restore users.
- . Direct seek to specified user number, and search for user name.
- . Mass purge operation to delete users by selected criteria (times user has called, date last logged on, and user status).
- . Displaying and restoring users that have been deleted, as long as a new user hasn't taken the previous users "slot" in the users file.

- o From within Z-Msg and with sysop-status, Control-P (^P) toggles operator's printer on and off.

- o A temporary simulation of half-duplex operation may be performed by using ^E (Control-E) to toggle the echoing of characters. Normally, message system echos characters back as they are typed; this control turns off automatic echo characteristic. Feature offers long distance callers a method to avoid most of the delay caused by time taken for characters to be sent and returned to their terminal.

- o The APply command now automatically sets subject of message to something resembling "*** New User Application ***".

- o Z-Msg may execute a program before the user logs out from the message system. Normally control is passed to telephone answer program (Term3's T3ANSWER and IOP or BYE) which disconnects to modem, and prepares for next call.

- o When editing a line of text while entering a message, you may specify rest-of-line as deleted in replacement text by appending a "#" to new text. For example: line 5 text is "Mary had a little lamb"; if line is edited with search string "little" and replacement string "big elephant#", resulting line becomes "Mary had a big elephant".

- o Greater ability to upload text, like WordStar files, exists because message system now strips (zeros) high-bit (bit 8) of byte (character) from typed text in more places than in previous versions. Also, any linefeed character received is translated into a space character. Thus uploading a message with embedded Carriage Return/Linefeed characters, in that order, need not have the first character in each blank line be a space.

- o If a clock is installed, the sysop may set a separate timeout value for each user type. Value determines time duration a user stays on system, before being auto-logged-off, at Z-Msg command prompt. The following object-code routines are supplied and installed from a Z-Msg menu:

MEC-5832.CLK - 5832 homebrew clock	MEC-LG2.CLK - Kaypro 2 and Legacy clock
MEC-BBII.CLK - Big Board II	MEC-KPRO.CLK - Kaypro 2 and ProClock
MEC-CW.CLK - CompuTime/QT clock	MEC-QX10.CLK - Epson QX10
MEC-KP4.CLK - Kaypro 4 clock	MEC-XERO.CLK - Xerox 820-II clock
MEC-LG10.CLK - Kaypro 10 and Legacy clock	
MEC-SS1.CLK - CompuPro System Support 1 clock	
MEC-KCT.CLK - Kenmore Computer Technologies clock	

Additional routines are possible using MECLKHDR.ASM file supplied, or with BYE 3/5 clock insert files.

Z-Msg has become so significant in our software stable we cancelled EMSG development. Z-Msg takes us through the 1980's to Earth satellite relay packet networks.

Z-Msg, with 80-page loose-leaf, is offered for \$99.95, plus \$4.00 shipping and handling. Source code is an additional \$100.00. Manual alone is \$20.00, refundable if program ordered later.

Use of DRUGS

Learn, know physiological results from taking hallucinogenic and narcotic drugs. Drug abuse bares bitter fruits. Any who want to argue about the so-called beauty or harmlessness must awake and start thinking. If drugs control you now, the habit pattern may be so powerful you will need outside assistance to break it, to find another way to get through the day.

How Hallucinogenic Drugs Work in the Brain

Diagrams below are accurate representation of facts disclosed through micro-photography within a living human brain. Photos were taken during brain-cell process of transferring a sensory message from one brain cell to another. Cells are directly related in chain from input to senses to final action, thought, or decision made as a result of that input.

Diagram I

In normal transfer of sensory signal from cell to cell, after an initial electrical impulse, the brain cells do not actually touch; transmission is accomplished by tiny, tiny grains of protein, called "transmitter granules", which cross tiny gap between the two nerve cell endings. If, for instance, this particular signal is part of a shade of green (hundreds or even thousands of cells would be involved in ascertaining a tree's shades of leaf color), the granules cross gap between correct nerve endings and transmit that specific, correct shade of green for which they were biologically, genetically programmed (through heritage).

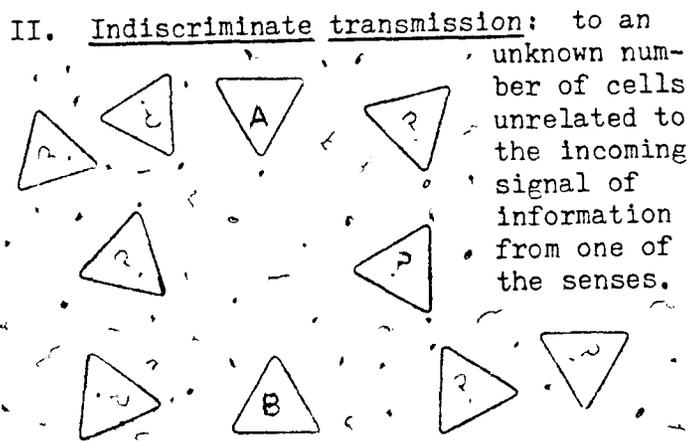
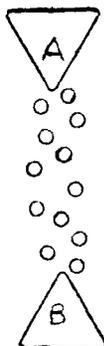
Diagram II

Under influence of hallucinogenic or "mind-manifesting" drugs, these transmitter granules are physically disrupted, broken up into hundreds or thousands of bits and pieces. They then scatter all over the brain, indiscriminately hitting unrelated brain cells. Sensation of green may be mixed with some red. Bits may hit a cell end transferring impulses of "up" or "down" or danger, joy, pain, guilt, anger, and may hit possible subconscious fantasies of murder, great powers, suicide, and so on.

What seems to the drug-user as a "high" is really an all-time low, in terms of correct, reality-oriented, significant information. And that can lead to incorrect thoughts, feelings, judgments, and irrational decisions and actions—and non-action when action is indicated.

This is the danger of drug-abuse: FEELING AND REACTING TO NON-REALITY! Love and relationships cannot grow and mature between/among people influenced by drugs. Alcohol, marijuana, cocaine, LSD, PCP, and heroin. Drugs, a cause for battering among family members, marital divorces, and broken friendships. Think straight. Rise up! and become what you are capable of becoming.

I. Precise transmission



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Industry Brief. Toshiba produces CMOS exact-replacement for NMOS 280 chip. Dissipates but 60 milliwatts at 4 megaHertz clock rate, compared to over-a-watt for conventional 280. Mostek, 280 supplier owned by United Technology, doors closed. 280 without Mostek and its superior documentation and customer support would never have become so popular; but now it's gone. Can western companies compete with Oriental?

Japan's industry (attention to detail) fast overtakes USA's. Such industry forces Detroit to improve their offerings—Detroit has some ways to go! Reason we buy Japanese imports is same reason they wouldn't buy ours, no matter how fair and easy the marketing channels. Ignore scape-goats, increase value.

Ramblings. (Still camped on mountain top, positioned among plants and animals, co-inhabitants of Earth.) Creatures of habit, appetite, consumption, re-action, we continue to be; business as usual, as we lose our economy, our mental and moral advantages. Take a longer view, or become a second class culture or perhaps worse, extinct. Our enormous abdomens betray us—tell of our true worship. Or are we addicted to generating internal endorphins?

There's an infinite number of levels of drunkenness, ranging from an overdose of beauty to an overdose of alcohol or heroin. (Yes, beauty causes us to linger, is a major stumbling block to learning, to becoming.) We are without much fancy or imagination—we lust for satisfaction, fulfillment without working for it.

Listen, there is no second-party salvation; it's up to you to make of what's available, to turn substance into finer essence. There is no heaven but what's in your mind. Heaven is not a place; it's a dimension added to your understanding (see end of Z-News 304). The shell game is over—life starts and stops with you and me.

You may have heard it said "plagiarism is basic to culture, any culture." We each use to advantage things past. But, we must pay for such use by creating things of equal value others can use. Such accounting adds to Life instead of death, promotes local Construction (that echoes throughout Cosmos), not destruction.

What constitutes the Whole (question asked in 307, pg 5)? Integrity. How can any one be weak, false who dares to be at all? Even tender plants force their way up through hard soil, and crevices of highway asphalt; surely, a human being, no material substance can resist. What a wedge, a force, Third Force, is an earnest person! Can he be resisted? The heavens are as deep as our aspirations are high. So high as a tree aspires to grow, so high it finds an environment to nurture, to nourish it. Is there one who dares not see clearly beyond, though only a hair's breadth beyond where he currently stands? Z-System users, dare!

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See you down the lines...

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FLY with Z!



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