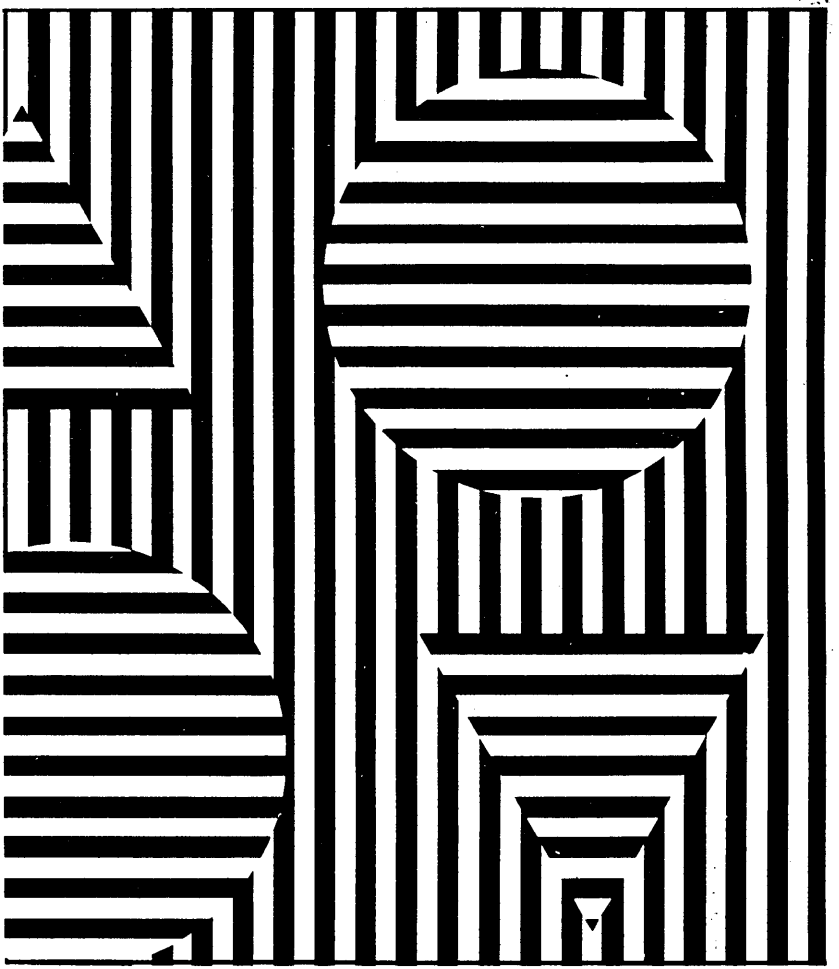
BAMDUA BAKUP News

Bay Area Micro Decision Users Association • Bay Area Kaypro Users and Programmers



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534-4257 voice
answer machine

BAKUP
P.O. Box 8537
Berkeley CA 94620
415-849-9389 BBS

PUBLIC MEETINGS

Albany Senior Center
846 Masonic Avenue
Albany, CA
3d Tues. each month
7:30 pm - near
corner Solano Av.

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Secretary	George Borys
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BAMDUA PBBS/RCPM (& similar MOR PBBS/RCPM)

Phones:	(415) 654-3882 **BAMDUA**	Sysops:	Steven Wartofsky
	654-3798 **MOR**		Sypko Andreae
Baud:	300/1200/2400	Free:	BAMDUA & BAKUP

Hardware: Morrow MD Hard Disk - CP/M 3.0 - 2 X 22 Mg
Software: PBBS, BYE, KMD, ZFILE, LUX, MAP, also PRACSA Member

Current Circulation: 550

On Modemaniacs: For some years, I've been interested in just who computer users are, and what they do with their computers. Many publications have done surveys, and for personal computers, writers are the gross majority by a long shot. You can envision these computer users alone in their homes on the keyboard for the majority of the day, with little social interaction.

But then there are those who are users of the allied item, the modem. Who are they? What do they do? What is the modem to them? Are they the hackers who appear every so often in the news?

As with all societies, it turns out there is quite a variety of people in the modem user category. My approach to finding out who they are was a simple survey which I offered on a dozen or so RBBs throughout the San Francisco Bay area. The computer capable student is only a portion of what we find.

Many RBBs allow the use of pseudonyms, and that keeps up some of the frivolity. I have interviews from people who adopted names of literature or TV villians ("No. 6" from The Prisoner, "Baron Harkonnen" from Dune) and others with unusual names they made up (Bobli and Ksnarlsk Aznu on the House of Games RBB). Imagination is always a gift. "Baron Harkonnen" was a student at Miramonte High using a Hayes 1200 Smartmodem and a Compaq Deskpro 286, while "Opus the Penguin" was at Albany High and used an Atari acoustic modem with whatever computer he could find. The gaming bug bit those two, as well as "Tharrys Ridenow" who used TRS models and was a student at Albany High, too. "Commander Zero" was a student at Berkeley High who first used computers at the Lawrence Hall of Science. Many of these younger users had first courses in BASIC or FORTRAN, but had moved on to better computers and uses with their increasing experience.

While I happened to be on the RBB of a younger group on the morning the space shuttle exploded, I was enthralled that they set up a mass transmission of support to the families and to NASA, so the program would continue. I am always amazed at such empathy, and was doubly encouraged that it came from a collection of high schoolers who have to work out the problems of their own lives in just growing up.

University students were just as interested in games, and used small computers (Apple, Northstar, etc.) for school as well as the modeming. One Northstar user set up an RBB of his own, and posed a mechanical engineering question as a puzzle each week. Universities represented were in San Jose, Santa Cruz, Santa Clara, and San Francisco. Eric Moneysum (pseudonym?) was a UCB student in math and computer science who cautioned me not to generalize on modem users. He reminded me that some RBBs are for early teen chat, and others are computer specific. The newer RBBs are alloting hard disk space to the special message areas having to do with the special topics of interest to just a few. Certainly, the DEADHEAD section on THE W.E.L.L. does qualify as such a special topic. I have a special soft spot in my heart for such special topics, though.

Some older people (those out there working for a living) are in the category of modem junkies, too. One assistant sysop for Kay*Fog is a professional poker player (he calls himself

their resident curmudgeon and I was the occasional visiting curmudgeon), while several attorneys are frequently met on SKATEBOARD as well as Kay*Fog. Another modemer confessed to being a professional sailor (what's that?). One production manager for a newspaper in San Francisco was pseudonymed on an RBB frequented by the younger set. I was pleased to find many "adults" on the game RBBs, like House of Games where I found a mental health facility resident manager on board (among others). There were professors and navy veterans and professional writers. One of the interviewees was training the disabled to use computers for their vocations or avocations.

Many of the adults were users in the same time frame I have with computers (15+ years mainframe user, 5+ years on micros) and are working in the industry - in sales, programming, data base research or even computer or copier repairs. I am amazed at the number of users who have more than one computer, though I know several sysops who have one for the RBB (dedicated) and another for their "real" computerist needs. One of the "older" users played the original "space war" game at MIT (see the book Hackers if you are not familiar with it).

There are artists (as opposed to techies) on these RBBs. A SKATEBOARDer listed several vocations in order of financial importance, as photographer/writer/computer consultant/painter. Another artist uses her computer for social interaction and to maintain data on the sale of her ceramics. She was good enough to help me on the review of a graphics computer program. The information artists include a professional indexer (also a helpful person in writing computer program reviews) and an information specialist for Levi Strauss.

A query on hobbies showed computers, modeming and games (especially the role playing kinds) the most common. However, there were board sailors, gold miners, hikers, bikers, sci-fi readers, and the (perhaps) expected radio hams. Music was a fairly ubiqitous hobby, too. As modeming is a "safe" social hobby for the careful ladies of this age, many use the modem without using their whole name (or their real name). It is always a delight to meet someone you've corresponded with via modem, as you have an appreciation for their wit and philosophy. I usually meet them at user groups.

A last general comment on the society of modem users. They tend to be a very social group, willing to chat, or have messages of substantial length to exchange information, frivolity or philosophy (or all three) on specific topics. It's a great social outlet for when your work keeps you in an otherwise socially deprived environment. They are fun, and helpful to the novice, as well.

In the heat of July, I was fortunate enough to attend an International Mathematics Education Conference in Budapest, Hungary. I can report that the food was good and inexpensive, the public transportation was dirt cheap, and the language was difficult (though I did learn how to order cold beer). One side line objective was to make the trip a busman's holiday and learn about computers around the world and see what's available. First let me say that Budapest is not the center of state-of-the-art computer science.

Most of the international computer displays at the conference were not very interesting to someone who is not in the education business. Programs were running on Commodores, Apple IIs, Apricots and a number of machines I've never heard of before, mostly European PC clones. This year mice were in (at the last conference it was turtles). The programs were of the educational bent, that is, a lot of drill and practice stuff (not very fun or original), some pattern matching stuff and some 3-D solid graphics. This was not the place to find state-of-the-art computers and software, mostly because someone had to cart that stuff through airplanes and trains, then through Hungarian customs. If you're truly interested in computers and education, talk to "Computer Using Educators" or a similar type of interest group.

At the conference was a mob of English-speaking Hungarian high school students, some of whom were of the species that love computers and are happy to talk about them. Most of their experience was on Sinclairs and Commodores. The Commodore 64 is the workhorse of the hobbyists. All the home computers were geared to run on tape cassettes as the cost of a disk drive was about $300-$500 dollars. Floppy disks alone cost about $6-$10 each. The hobbyists are in the situation that, if they want any program, they have to write it themselves in Basic. Only a very limited amount of commercial or public domain software was available. One inspired lad was building a modem out of discreet components and writing the software in Basic. A difficult job even with the new generation of chips and good software tools. It was interesting though to read a Basic program with the comment statements written in Hungarian.

Substantial computers are available to those who can afford them. I saw a few businesses with PC/XT clones. There are shops that will sell the individual components to build AT clones. I believe the import tax on finished products is higher than the individual parts, hence the lack of finished computers for sale, including name brand computers. The prices for the individual components are very high by U.S. and Western European standards. A PC power supply is about $500, while a Seagate 225 hard disk with a controller is over $1,000. I did not check up on software availability or prices. Before you head off to sell stuff and make a your fortune, a few useful points. Hungarians are not allowed to have any Western currency. Tourists are not allowed to take over 100 Florents out of the country, about $2 dollars. No one outside of Hungary wants or will exchange Florents.

My next computer stop was northern Sweden. There I was confronted with an Apple Macintosh SE that talked (literally) in

Swedish. Its menus were a mix of Swedish and English. My friend's children were running a program that, when a sentence was typed, the Mac would repeat it back in Swedish or English. The program had a switch to determine which language. The 12 year olds were having a great time determining whether the computer or I could pronounce the language. The computer was winning. English is a mandatory subject at school, starting when the children are about ten years old. The kids were doing a better job of English than I was of Swedish. I visited a few Swedish engineering and scientific companies where I saw a mixture of ATs and XTs doing what you would expect them to do, but again, few name brands and a lot of home built clones. I suspect that a high tax rate again may be a culprit (20 percent or more sales tax). I did get to see a Saab minicomputer driving a cyclotron.

Video Text is available on almost all televisions in Western Europe. On a TV, it can display news, sports, stock market activity, movie schedules and about anything else -- like a computer bulletin board always available on the tube. The viewer has a remote TV control that selects menus, channels, etc. The display can be superimposed over the channel being watched. Those who have played with it wonder why it isn't in this country.

Europeans complain that Americans don't not use FAXs enough. Communicating with the Yanks requires an expensive voice phone call or a slow letter, as international mail delivery times can be quite unpredictable. A number of educational groups in Sweden and Norway like to use Electronic Mail as a routine communication medium, despite the fact that modems and FAXs are quite expensive compared to their U.S. cost. This problem may be resolved as FAXs become more common and inexpensive, and as they become faster and with more options. The main manufactures are reporting record U.S. sales.

Connecting a modem to a telephone in Sweden is not a trivial task as multiple phone connections are not in parallel as in the U.S., but in series. No two phones can be off the hook at the same time. If a phone "upstream" is picked up from the modem, the modem gets disconnected. Modems get their own phone line or use acoustical cups on existing phones. The phone jacks are also quite different than the U.S., but adapters are available.

Trying to find a coin phone booth in Paris is a difficult if not impossible task. Pay phones use computer debit cards and subtract the cost of each call. The locals buy the card from a tobacco shop, then "fill" it up with money. The cards contain a computer and some memory. Somewhat like a smart BART card.

A useful point here: although most computers and computer people converse in English, major brand name computers can be provided with ROMS, keyboards, operating systems and programs in other languages. This includes the venerable KP-II. In the U.S. expect to do a bit of shopping and special ordering to get them.

MORROW

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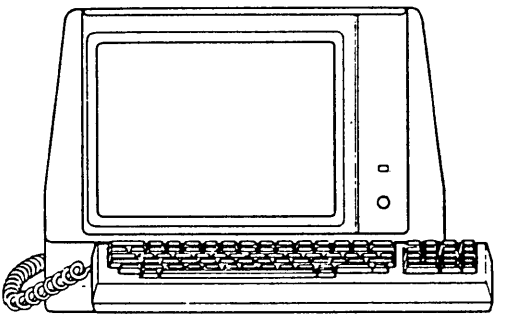

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More answers, painfully acquired through personal experience, on programming function keys with WordStar 4.0:

The function key option of WSCHANGE lets you program function keys one at a time, rather than by using the patcher to enter a long list of keybursts and keystroke sequences. But it writes your entries only to the function key table; after that 128-byte space is filled it will give you an error message. If you need more space you must enter a command to jump to another area, usually to MORPAT at address 045B, which offers another 128 bytes. You can't enter the jump command or program MORPAT from the function key programming feature of WSCHANGE; you must exit and go to the patcher or use DDT. From the patcher, enter an equal sign, then the address to which you want to go; the function key table ends at 031D, so if you enter 0300 you should be in the right area. From there, move ahead by pressing RETURN until you find the end of the table--where all the 00's start. After the last function key sequence in the table, enter "00 5B 04" (note that the address must be entered backwards), then type "X" to leave the patcher. Now you can use the patcher to enter the rest of your function key sequences: type another equal sign and enter the label "MORPAT" or "045B." When entering bursts and sequences with the patcher you must precede each entry with a number that represents the number of characters in the sequence. E.g., if the function key burst is "01 65 0D" you enter "03 01 65 0D." If the function key sequence is "0F 43" enter "02 0F 43." Remember that these are hex numbers, so ten characters is 0A, 11 characters is 0B, etc.

The MDT-50/Freedom 100 terminal has, in addition to ten function keys that send three-character bursts, four keys above the numeric keypad labeled "EOP CLR EOL," "DEL LINE INS," etc. These keys send two-character bursts beginning with an escape character. (Left to right: ESC T, ESC E, ESC Q, ESC P; shifted: ESC Y, ESC R, ESC W, ESC L.) With NewWord, you could program these keys into the function key table. In WS 4, the shorthand function preempts these keys. Enter the second character of each of these bursts into the shorthand table and they will work just like function keys. Remember not to use these eight letters (either upper- or lowercase) for other shorthand sequences; it's easy to remember what letters they are: QWERTY plus P and L.

Some writers have complained that WS 4 takes so much memory that Smartkey won't work. Well, it works for me, although I suppose if the keystroke file gets too large it may quit. I found it satisfying to program shorthand meanings for the numbers 1-0. On my keyboard they are in line with the ESC key and directly under the function keys F1-F10, so they are almost like another row of function keys, and I can label them across the top of the keyboard. Meanwhile, I use the CLR HOME key as a supershift. Since it's only a short hop from there to the numeric keypad, I can use Smartkey to program the keypad keys as another batch of function keys, which gets me about even with the MDT-60 and MT-70 people at last.

word left of the cursor, or mark a sentence or a paragraph as a block by just pressing one key!

Bruce De Selle is looking for a print screen utility. He was referred to I/O-CAP by Kelley Smith, but says all he can do with it is record keyboard entries to a file. I believe the commercial programs Presto and Write Hand Man include screen printing utilities, or at least utilities to write the screen to a file that can later be printed. Does anyone know of a public domain program that will do the same thing?

Regarding our discussion of OSB.COM, **Paul Schlager** (forgive me if I misspelled that, Paul, I can't read my own writing) tells me that the "fine print" in the documentation says it reads only single-density Osborne disks. "I haven't seen an Osborne single-density disk in five years," he says.

I'll close with a question of my own: I've just acquired an HP Deskjet printer, which is capable of doing graphics with the same resolution as a Laserjet, i.e., 300 dots per inch. I plan to try to write a program that will print music, but before I reinvent the wheel, does anyone know of existing CP/M software that will do this, either on a laser or a dot-matrix printer? Also, does anyone have any experience in using download fonts with a CP/M machine and a laser?

CP/M TurboPascal Rescued?

The Z-Letter

There is a new newsletter for CP/M-ers available. It is called **The Z-Letter** and is published by Joe Wright, Alpha Systems Corporation, 711 Chatsworth Place, San Jose, CA 95128, (408) 297-5595. The last issue I received was Number 2, October 1988, and had 34 pages of unreduced print. I especially noticed a story about plans to distribute and support CP/M Turbo Pascal since Borland has thrown in the towel.

Another noteworthy piece of news in The Z-Letter is about various efforts to develop Z280 machines and software. A firm by the name of Computer Design Solutions is making the SUPERMICRO, an S-100 bus based Z280 single board computer. Getting a good Z280 based operating system developed is still a bit problematical, but progress is being made. Contact Randy Gilleland at Computer Design Solutions, Inc., City Center 206 Cooper Street, P.O. Box 127, Statesville, NC 28677, (704) 876-2346.

Mention is also made of The UCPM Manual project. This is an effort to create a universal CP/M manual which is envisioned as a compilation of general articles, machine specific information, etc.

And many pages are spent on the wonders of The Magic Series software used to produce the newsletter itself.

You may want to check out this publication, which is churned out on a monthly basis by editor David A.J. McGlone in San Jose, CA; subscription cost is $24 per year if you are in the US, $32 in Canada and Mexico.

Sypko Andreae

A news release from Timeworks (444 Lake Cook Rd., Deerfield, IL 60015) shows they produce a desk top publishing program for the PC that includes a WYSIWYG word processor, graphics, text importing. They want $199 for this.

Epson is selling IC memory cards that contain 2 MB ROM or 512 KB ram, 1 MB EPROM, 32 KB EEPROM. With advances in solid state memory (FRAMS, ferrite based memory, a distant cousin to the old core memory), expect to see the RAM memory expand to at least 16 MB on cards in the not too distant future, possibly 5 years. A lot of big name companies are coming out with cards. As of yet there is no standard interface. This is one of those "driver technologies" to watch. Expect a lot of new and cheaper "smart cards," whole dedicated computers the size of a credit card. The electronic trade magazines report that this is where a lot of industrial interest is.

Hard disks are now coming out in rugged removable cartridges. These are not Iomega's Bernoulli box. Tandon Computer and Plus Development offer removable 20 to 40 MEG hard disks. Plus's looks like a cartridge that fits in a half height slot on the computer. Tandon's is much larger and requires an external house to put it in. The Tandon salesman for a demo removed the hard drive, pounded it on side of a display booth, dropped it then booted a PC/AT from it. They are tough! Also they are much cheaper than Bernoulli. Tandon wants about $1,000 list. Plus wants about $1250 for an XT/PC system.

For hard core Turbo Pascal programmers there is a magazine called Turbo Tech Report. It is exclusively for TP. Subscription is $89 per year (510 Galveston Dr., Redwood City, CA 94063).

The popular WordPerfect has been ported to the Apple Macintosh for $395. It should be available by now.

If you haven't heard of Neural Networks (NNs) yet, well get ready. This is supposed to be the hot new thing in computer thinking. A number of companies have been writing neural network emulation software, emulating, that is, the human thought process. But neural networks are supposed to be a hardware type thing, i.e., the computer is built like a brain, complete with nodes and interconnections, etc. The whole idea of neural network computers is that they can "learn" and solve routing type problems. An NN program on a normal computer is limited by its architecture.

Universities and corporate research departments have been spending a lot of time and money on NN research and keeping a lid on progress until something marketable is ready, but a few NN computers are now for sale. They contain 2-3 million nodes and connections and learn at about 6 million connections per second. They sell for about $15,000 on up. They need an AT/386 or bigger computer just to act as a host. Software simulation programs are much cheaper (starting at about $1,000), and will run on PCs, ATs, and Macintoshs. As NNs gain momentum, expect to see more specialized hardware show up and prices drop.

The mail box is still filled with the usual electronic "throwaway" magazines. The quality ranges from serious technical electronic articles to exclusively incomprehensible high tech

ads. All of it can be interesting. The favorite topic in the last year has been the 32 bit RISC (Reduced Instruction Set) computers which are now available. The big guns of the computer world are all now in the business. RISC cards are available for PCs and Mac IIs. This is basically a single board computer that uses the resources of the host computer to drive the keyboard, disk drives and the monitor. One single computer board for the Mac II gives a 20 fold speedup for about $4,300. Most of the stuff, though, likes to live on the AT bus.

RISC is really just a computer method in which the instructions are very few and simple, like add, rotate, move and the like. There are no complicated instructions like divide, block moves, or steps that take more than one clock cycle. A PC or Mac can take up to a couple of dozen clock cycles to do an instruction. The RISC computer has more built-in registers so movement to memory requires shorter addressing and an instruction can have data mixed with it. What does it mean to the hobbyist? As the price drops, and if you wishe to build your own very fast computer, this is one way to go. There is a lot of literature out there so plan on lots of legwork to learn specifics.

If you thought PCs were getting smaller, you're right. Intel is now selling the Wildcard-88 for $50. It is a 9.1 MHZ CMOS 8088 with controllers for keyboard, interrupts, timers and memory. It is on a 2 by 4 inch card.

Digital Research, the inventors of CP/M, sell a memory chip called DR-DOS. It is an MS-DOS 3.3 look-alike that puts the DOS into ROM for embedded operations. This means that no disk is required to run the computer.

This looks like a nice idea. Noise Cancellation Technologies of New York, for example, use a computer to look at the low frequency noise in the automobile exhaust, then drive a loudspeaker in the muffler with a sound that is 180 degrees out of phase, canceling the exhaust pulses. This can eliminate normal mufflers that can reduce fuel economy by about 20 percent.

Dallas Semiconductor is selling a computer and radio transmitter on a chip. It can be used for tracking systems that currently use bar codes to follow products through a manufacturing production line. It has a transmission range of only 5 feet. It will cost less than $10 in larger lots, but it is in the price range of hobbyists looking for novel applications.

Silicon Composers of Palo Alto is selling a parallel coprocessor for the PC-XT based on the Harris RTX 2000 computer. It has a Resident Forth RISC instruction set that is capable of up to 50 million Forth instructions per second. They include a software development system with an optimizing Forth compiler. They want about $2,000 for one of these.

Compu-Tec Products of Colorado Springs is selling a rechargeable battery for the PC/AT for about $40. The current battery has a lifetime of 6 months to several years.

Insite Peripherals of Santa Clara are beta testing a 20.8 M byte floppy disk drive for about $250, OEM price. Special floppy disks are in the 3 1/2 inch format. The tracks on the disk are put on as it is made using optical tracking from compact disk technology to get 1250 tracks per inch. This is not like Win-

chester hard disks where the read/write head floats over a continuously turning platter. Instead, the r/w head actually presses against the floppy disk. They may be available from retailers about April. [**Editor's Note:** Insite will not sell direct to public, but to manufacturers who will include the disk drive in their new magic machines.]

Getting Personal with Pearl — by Bruce M. Gowens

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[Bruce Gowens does Pearl consulting, but doesn't charge to help Pearl users with glitches and small problems. He can be contacted on the MOR BBS or write to: P.O. Box 8068, Emeryville, CA 94608; include permission for him to call you collect.]

Pearl File Load: I reviewed Pearl File Load in MOR (Oct/Nov 1985, p.26), but since then I've found some problems with it and some tricks to solve them.

Pearl File Load ("FL") is a separately sold program used to transfer data into Pearl from other sources or batch modify records in Pearl. Most Pearl users don't need it as a matter of course, but when you do need it you generally need it very badly. I've used it many times to solve problems for clients that otherwise would never have needed it.

Examples:

- Save last year's records into an archive data base and clear them from the working data base (similar to closing the books in accounting) while retaining those that are incomplete or have been entered after the closing date.
- Merge two mailing lists into one Pearl data base that had been kept as two data bases on floppies. (The client got a MDHD machine. Before that the list had grown too large to fit on a single floppy.)
- Transferring data from a field that had been declared "character" type when it should have been number or date type, into an appropriately typed field.
- Transferring a mailing list into a Pearl data base that had come from another source.
- Transferring data from a CP/M Pearl base into an MS-DOS Pearl base. For this the MS-DOS FL is needed but the CP/M FL is not.

Tricks to Use with File Load: FL's method uses two files. One is a control file that you write in non-document mode with your word processor. This tells FL what to do. The second is a text file (Source) of the data you want to load in.

The control file lists the operation (Add, Delete, Modify, etc.), and other parameters as well as the field names in the order in which they appear in the source file. It is easy to write but not always easy to get perfect (which it has to be to work properly). Three particular warnings and tips:

- Do not use the tab key when creating it. Instead always space over.
- If you use a word processor other than WordStar or NewWord, make sure the file length is some exact multiple of 128

bytes by adding asterisks (FL's "comment" or "remark" character) -- and don't forget that each line has a CR/LF pair of characters. WS and NW always write 128 byte blocks, so this is not a problem with them.

Make a Backup Copy First! Always, always, always make a copy of your data base before using FL. You are not likely to get it right the first time, and you never want to be forced to hand-key corrections on fouled-up data (even if you can figure out what it was supposed to be).

The data source file is a standard ASCII text file, usually with some character used to separate (delimit) the fields and records. This can be produced as a report to disk from Pearl or another data base program, as an output of a Basic or other custom program, or it can be keyed in (keying in is usually best for making a single change to a lot of records rather than to enter new data).

FL uses a "key field" to identify which record is to be changed. This is fine when you have such a field that has been declared an exclusive index, but FL doesn't help if many records can have the same value in that field.

An example: I had a entry date field in a landlord's data base that should have been declared date type but instead was character. Date type would have forced the same format on the data (11/01/88, and not 11/1/88) so that entries would be consistent for report selection. The main field in the record was a code indicating the unit (apartment), but there was a record for each month for each unit.

Normally one can change the data type with FL by making a report with the key field and the values in the improperly typed field, then use FL to feed the values into a new correctly typed field, and then eliminate the old field from the form layout. No good in this case since FL wouldn't be able to identify exactly which record should be changed because there was no field that was exclusive to each record. If FL could select the record to be changed with simultaneous fields such as unit AND month it would be a lot more useful.

Splitting up Large Data Bases: If you are splitting one large data base into two smaller ones (such as a current working data base and an archive of last year's records), plan it to use the delete instead of the add operation. It is very difficult to get perfect report (source) and control files when you have records with lots of fields. Instead, make two copies of your original file (one is a back-up in case you goof) onto different disks or user areas. Then do reports to disk that simply list the key field data for the two periods or sections (these are your source files that the control file uses to find the records). Now you have only one field to deal with. Delete the old records from the current file with FL. Delete the current records from a copy. Rename the modified copy. Call Design Forms and re-install it with its new name. Use File Maintenance to compact both. With a data base of any size it is still a long, boring and often frustrating operation. Plan to do it over several days with the machine running at night.

Where to buy File Load: Contact North American Software, P.O. Box 1388, Hillsboro, OR 97123; (503) 681-7629. Price $100. North American is PearlSoft's distributor.

301 North Roadrunner Parkway, #109
Las Cruces, NM 88001

Yeah, I know, I missed an issue. It seems that the combination of my normal procrastination and a family problem got me way past the deadline.

Let me tell you a little about the family problem. My father is 76 years old. He fell and broke his hip which can be quite serious at that age. However, he is in quite good health so that wasn't a problem. The problem was that he was driving everyone, especially my mother, bananas. He was in traction and was bored out of his mind.

I threw a bunch of clothes in a bag and headed out to Cocoa Beach, FL, where they live. My poor mother was spending all day, every day, at the hospital. My dad was grousing about being read-out, crossword-puzzled-out and TVed-out. What he really wanted was his COMPUTER!

Now understand that my dad is a journalist by vocation and avocation. If any of you watched the 40th Anniversary TV show on WGN that Jerry Rivers butchered in his own inimitable style, you might have seen a short interview with my dad. He was WGN-TV's first News Director. Be that as it may, my dad has always had a strong technical bent. He got his first Amateur Radio License in 1939 and is still quite active.

For my dad's 70th birthday I sent him a Timex computer. I figured that he'd play a few games with it, maybe mess with a morse code copying program and then it would end up gathering dust. But he'd get $20 worth of enjoyment out of it. Oh no - the next thing I know I'm getting phone calls asking about PEEKs and POKEs, memory expansion, direct video output and other strange things.

The next thing I know he has added memory, an external keyboard, a video monitor and a parallel port with a printer. He was having a ball with word processing, genealogical data bases and, of course, games. It didn't take him long to outgrow the poor little ZX81. He then progressed to a Timex 2068. He had grown used to Sir Clive Sinclair's different way of doing things. Soon he was adding serial and parallel ports. And a daisywheel printer joined his dot-matrix job.

The interesting thing was that he was doing all this using cassette tape for storage. He finally decided that maybe he should try disks. Now at the time of his accident he was having problems. I had given him a couple of Remex disk drives with the caveat that all they were good for was book ends. Well, Dad just couldn't let that be. He had to try them and sure enough they still didn't work worth a damn. Knowing that to be the case, I threw one of the Sugarts that I had removed from my MD3 when I upgraded to 3-1/2 inch drives in my suitcase when I headed east.

Now back to my dad in the hospital. We looked the situation over and decided that there just was no way that I could get his lash-up into the hospital in such a manner that it would be useful to him. He was heart-broken. We did the next best thing. I took his ham handi-talkie to him in the hospital. That way he could call me on the radio and we could talk about what I was

doing to his computer! Understand that he had a phone in the room and there was a phone in the den where the computer lives. Somehow, using the radio just made it better. During my time there we managed, via radio, to get the disk drive system up and running.

Meanwhile my mother managed to get at least half a day of rest every day and we watched the Olympics together. (Unfortunately I wasn't particularly interested in basketball, volleyball or boxing so I found it quite boring.) We also watched the Shuttle launch from my dad's hospital room. He was on the 7th floor of the hospital and had a direct view of the launch pad. Lovely sight!

Now what does this all have to do with computers? Not a whole hell of a lot except to point out that youth does not have a monopoly on curiosity. I am always facinated to discover another "senior citizen" who is delving into the mysteries of computers. What is even more interesting to me is that these "old grey heads" more often than not don't have a non-technical background. I don't know what all this means, but it is interesting to me.

Well, back to the computer world. George Borys has struck again. He has come up with a simple, easy and cheap method to add a real-time clock to any Morrow MicroDecision. He has relegated the Mike Allen Clock Kit to oblivion. I suspect that the article on the clock is elsewhere in this issue, so I won't go into detail. Suffice it to say that it takes a lot less technical skill to install than the MACK and requires no construction. George in his normal style has put together a complete package that includes a version of Carson Wilson's Z80DOS that includes datestamping of files and the time in the prompt. All the software is available on the MOR and BAMDUA boards. I hope someone has put it on the MOR-Atlanta board.

The next version of ARK is out. ARK04 has just shown up. I was having trouble with ARK035. It flat wouldn't run on my MD3 using DOS+25. ARK04 does run. I haven't had much time to mess with it so I don't know what improvements/corrections have been made, but it seems faster than ARK02 which was the last version that would run on my MD3.

There is a new modem program out called ZMP. The latest version I've seen is ZMP14. There are overlays for all the MDs. The big advantage of ZMP over MEX or IMP is that it handles the new ZModem protocol. If you don't check into MSDOS BBSs you probably haven't run into ZModem. It hasn't hit the CP/M world yet. It is a batch transfer protocol, like YModem, but minimizes the handshaking. This can add up to some real time saving, especially at higher baud rates.

The way YModem works is that there is some initial talking back and forth between the programs to set up things such as the name of the file to be transferred. Then the sender sends 1024 bytes plus some error checking bytes. It then waits for the receiver to reply that it either got the block or didn't and reacts accordingly. The way ZModem works is that it just keeps sending blocks until the receiver tells it that there was an error. Then the receiver tells the sender where to pick up.

Now I really notice a difference when using PC Pursuit. From New Mexico I see almost a 2 second lag from when I send a

character and I see an echo. When doing file transfers, that means there is almost 2 seconds added to the transfer time for each 1k block. I tried some sample transfers via PCP and found that I was getting between 15% and 20% faster transfers using ZModem.

There is only one program out (that I know of) for the BBS end of CP/M ZModem transfers. It was written by the same guy that wrote ZMP and is called RZMP. It seems to have some problems not the least of which is the lack of an interface to the KMD logs. There is another fellow working on a full KMD replacement called ZMD but so far he doesn't have ZModem implemented.

ZMP is not as sophisticated as either MEX or IMP. If you are a confirmed user of either of these programs you probably won't switch until the ZModem protocol starts to show up in force. It is a nice program and the 1.4 version is quite well behaved. Give it a shot.

Is there much CP/M activity on the national services? Well I belong to CompuServe and GEnie. The Sysop for the CP/M section of CompuServe is Irv Hoff of BYE, KMD and IMP fame. On GEnie it is Keith Petersen who runs the famous Royal Oak board in the Detroit area. The newer stuff seems to show up on both systems with GEnie having a slight edge. This could be because all the new stuff seems to hit Keith's board quickly. Unfortunately, the message traffic and roundtable activity seems almost nil. I haven't seen anyone in the CompuServe conference area in ages. There is a little activity on GEnie although it seems to be almost all C128 users.

An interesting aside. If you remember, in my last column I gave a pretty good score to Plu*Perfect systems on their manual for Z3PLUS. I guess I was wrong! I ran into some guys on GEnie who were having fits trying to use Z3PLUS on C128s. It was the documentation that they couldn't understand. After chatting a little further it became obvious that they really didn't understand CP/M or the concepts behind ZCPR3. It seems to me that if we wish to keep CP/M going, we have to find and help these C128 guys. They are out there in huge numbers, and want to learn. Tap into those Commodore User Groups. Maybe set up a "sibling club" relationship. Just a thought.

A good buy: The Packard Bell PB2400PLUS 2400 baud smartmodem. Sells for about $150 from Service Merchandise with a 2 year warranty. I've had mine for about 2 months and am very pleased. The instruction book is in a rather strange brand of oriental English, but is quite complete. It comes with free sign-ups for CompuServe, The Source and GEnie and a modem program for MSDOS.

Have you been morrowing lately? Yep, that is a real word. I found it in this umpteen hundred pound dictionary we have at work. Morrowing means "to share aid with a neighbor." Sounds like an appropriate note upon which to end this column.

Everyman's Real Time Clock: For those of you who missed out on the Mike Allen clock kit based on the Oki M5832 chip, here's a convenient alternative that installs in any computer in minutes. The Dallas Semiconductor DS1216E ROM SmartWatch is a complete CMOS real time clock and lithium energy source, all fitted snugly into a 28-pin, 600-mil-wide DIP socket. Its timekeeping information includes hundredths of seconds, seconds, minutes, hours, days, date, month and year information. The date at the end of the month is automatically adjusted for months with less than 31 days, including correction for leap years. The Smartwatch operates in either 24-hour or 12-hour format with an AM/PM indicator. Accuracy is within 1 minute per month at 25 degrees Centigrade, and the embedded lithium energy cell maintains calendar time for more than 10 years in the absence of power.

The SmartWatch remains transparent to whatever memory device is placed above it. 28-pin ROMs like the 2764 (on the MD11) just plug right in, and 24-pin ROMs like the 2716 (on the revision 1 MD2) or the 2732 (on the revision 2 MD3) may be used with the addition of a "U" shaped jumper wire between pins 26 and 28 of the Smartwatch. The 2716 and 2732 are inserted right-justified: pins 3-26 of the SmartWatch mate up with pins 1-24 of both the motherboard ROM socket and the piggy-backed ROM. Pins 1, 2, 27 and 28 of the Smart-Watch just hang in the air. A side view of the different pin placements would look something like this:

```
2716 or 2732      1  2  3  4  5  6  7  8  9  10 11 12
ROM*:             !  !  !  !  !  !  !  !  !  !  !  !

2764     1  2  3  4  5  6  7  8  9  10 11 12 13 14
ROM:     !  !  !  !  !  !  !  !  !  !  !  !  !  !

DS1216E  v  v  v  v  v  v  v  v  v  v  v  v  v  v
Smart-   1  2  3  4  5  6  7  8  9  10 11 12 13 14
Watch:   !  !  !  !  !  !  !  !  !  !  !  !  !  !

MD11        v  v  v  v  v  v  v  v  v  v  v  v  v
board:   1  2  3  4  5  6  7  8  9  10 11 12 13 14

MD2 or MD3     v  v  v  v  v  v  v  v  v  v  v  v
motherboard:   1  2  3  4  5  6  7  8  9  10 11 12
```

*The 2716 and 2732 require the addition of a "U" shaped jumper wire between Smartwatch pins 26 and 28 before inserting the ROM in the SmartWatch.

All the information needed to install the Dallas Semiconductor SmartWatch in an MD2, MD3 or MD11 system is contained in a file called SMARTWAT.LBR (the SmartWatch library). The library includes SYSGENable system images for the MD2 and MD3 with Z80DOS20 and ZCMD29 replacing the Digital Research, Inc. BDOS and CCP. The portion of BNKBIOS3.MAC that needs to be changed is also included, though you will need your original CP/M 3.0 dis-

tribution disks and a copy of M80.COM in order to generate the new CPM3.SYS. SMARTWAT.LBR is available on 5-1/4 inch SSDD disk from BAMDUA (P.O. Box 5152, Berkeley, CA 94705) or from MOR (PO Box 5487, Berkeley, CA 94705) for $8.00, or it may be found on the BAMDUA BBS (415-654-3882, /CAOAK/ via PC Pursuit) or the MOR BBS (415-654-3798, /CAOAK/ via PC Pursuit).

The DS1216E itself is available from a number of sources under a variety of names ranging from SmartWatch to No Slot Clock. Prices for the DS1216E cover the spectrum from $49 (Radio Shack, includes MS-DOS software only) to $20.50 (wholesale to original equipment manufacturers, no software at all). It takes up practically no space, installs with no tools beyond a screwdriver, and it includes a built-in battery. It works, it's available and it's easy to implement. If it were any better, it would have to be illegal, immoral, or fattening!

Correspondence ■ Queries ■ Complaints ■ Editorial Submissions	**For Kaypro-related** articles, advertisements, or memberships in BAKUP ($20/yr), write to P.O. Box 8537, Berkeley, CA 94707-8537; or call Bob Athey at 415-526-3541. **For Morrow-related** articles, ads, or memberships ($20/yr) in BAMDUA, write to P.O. Box 5152, Berkeley, CA 94705, or I. Butler at 415-526-8655.

BAMDUA + BAKUP + MOR

WELCOME TO ALL FORMER BAKUP BBS USERS!

Nothing is permanent and that's why there is no BAKUP BBS anymore. But that is not the end for local CP/M BBS-ing! The MOR BBS **(415-658-3798)** welcomes you to apply at no charge. So, if you miss the BAKUP BBS, don't wait. At the MOR BBS you can soon find most of your old buddies again.

And the BAMDUA BBS will soon merge with the MOR BBS. The new, enhanced MOR BBS will then be run as a strictly CP/M board. We may switch to a newer system, HBBS, which is much like the current PBBS system, only better. Hope you join us.

MOR Sysop Sypko Andreae

Lonely? Call 415-

658-3798

Thanksgiving: The day of the Glorious Turkey inspired me to have Thankful Thoughts and I will share a few with you here. First Thank You goes to our columnists Mike Allen, Bill Steele and Bruce Gowens. Starting with their wonderful columns in MOR they are still at it today, producing the most knowledgable and interesting information available to Morrowers today. (For a definition of a Morrower, see mike Allen's column this issue.) Bruce reports an increase in letters to him about Personal Pearl, but Mike and Bill hardly get any mail anymore. On the other hand, both BBSs in Berkeley show messages with frequent calls for information and help. Thank You, George Borys and Tom Kunich for keeping the BAMDUA BBS alive and cleaned up. George is also very helpful with nasty problems involving the old Morrow version of the bootable ZCPR33. Some people are still struggling to make it work for them. George also keeps inventing innovative stuff; see his latest about SMARTWATCH in this issue.

Ilbert Butler deserves a Big Thanks for all his work this past year to clean up the IMP modem program and the MACK seminar he led, in addition to his elaborate treatises in BBS messages on sticky technical problems; see "Hints and Kinks from the BBS" in this issue. Rick Charnes, our old Z-champion, is still around giving help to Z-users over the BBS or by phone. Rick was instrumental in getting MOR involved in distributing the Morrow bootable ZCPR3 version from the now defunct Echelon Corporation. On behalf of all Morrow Z-users: Thank You, Rick. From Boston calls Jerry Maloney, who always professes not to know what he is doing, but he keeps trying anyway, with majestic results, while helping and inspiring a bunch of others at the same time. Thanks, Jerry, for your amazing contributions to the BBS. Another Thank You goes to Fred Haines from Los Angeles, another BBS caller, who never says so but clearly understands a lot about the intricacies of CP/M, programming languages and communications; just take one look at the clear explanations and helpful hints embedded in his BBS messages and you'll know.

Two special Thank You's go to the people who get our two remaining Morrow newsletters assembled and printed: Sunday Von Drasek in Berkeley gives birth to the BAMDUA/BAKUP Newsletter every two months, and Harold Arnovitz publishes the MOR-Atlanta Newsletter every month. Harold deserves a special cheer because of the quality of his monthly: The best looking Morrow newsletter we ever had! But what about MOR? MOR was not in the same league; it was a magazine. Remember? A special hardware-oriented Thank You goes to Brian Whittacker of Silicon Valley Surplus in Oakland, CA, for keeping lots of Morrow parts in stock and helping people out where he can. Have you tried his BBS? It is at (415) 261-4513 and it lists nearly all Morrow parts he sells.

Two more Thank You's, and that will be it for now. First many Thanks to Steven Wartofsky who up to May of 1988 sysoped the BAMDUA BBS for many years and did so expertly; he was especially a great help to beginning BBS callers and an expert in Morrow public domain software. We really miss him around here, since he moved to Chicago to become an English professor. My last Thank You goes to Ron Jacobs from Albany, CA, gifted Morrow

repair technician and giver of helpful hints to many Morrowers nation-wide. He's doing a great and competent job; what would we do without him?

The Ten Meter Telescope: By popular demand I'll will tell you now about my involvement with the soon to be famous Keck Observatory Telescope, the largest of its kind. Its construction is a collaboration between Cal Tech in Pasadena and UC in Berkeley, while the overall management is in the hands of CARA in Pasadena, a corporation especially designed for that purpose. CARA stands for California Association for Research in Astronomy.

The telescope is of the mirror type. Why? Because mirrors can be made much bigger then lenses. Why is size important? You can catch more light with a big mirror. You see, this is an optical telescope designed for optical and infrared light, as opposed to radio telescopes. The astronomers want to look at things much further away than ever before. The light from these far-away galaxies is extremely weak. You could never hope to actually see such a galaxy with your eyes peering through a telescope. The only way to "see" those deep-space objects is indirectly, from images produced from time-exposures by photographic or electronic cameras. The mirror is made as large as possible to catch as much light as possible.

Telescope mirrors -- unlike those used for radio telescopes -- need to be optically perfect reflecting surfaces, utterly smooth and ground to the exact right shape with a tolerance of microns. That is not easy. The Russians made the last one-piece telescopic mirror out of solid glass. It didn't work out that well. Not only was it extremely heavy -- which made the mechanical support system expensive (and heavy!) -- it turned out to be nearly impossible to grind it into its proper shape: After each grinding run (many hours long and computer controlled), the shape had to be checked to measure progress. But the grinding would heat up the big glass mirror so much that accurate measurements could not be made until the huge piece of glass cooled down, and that took days! No wonder that to this day they are still grinding...

Two physicists from UC Berkeley, Jerry Nelson and Terry Mast, decided some nine years ago that there had to be a better way. They dreamed up a system of mirrors consisting of relatively light hexagonal pieces of glass, all fitting snugly together into one big mirror with a diameter of ten meters. The composite mirror was much lighter than anything the same size anybody could have made out of one solid piece of glass. The steel support structure could be made much lighter and thus cheaper. In other words, it could actually be done.

There was one big problem, though. Although Each mirror segment will be perfectly rigid and in focus, that can't be said of the big composite mirror as a whole. The steel support bends a little, and the wind moves the mirror segments in different ways. In short, if left to itself it would be a rather floppy and unfocussed affair at best. Somehow the proper mirror shape had to be maintained in order to have the big composite mirror focus exactly.

The problem of maintaining the proper shape of the big composite mirror was solved by designing the Active Control System,

a system that continually senses the positions of all mirror segments relative to each other and then makes tiny corrections in case the segments are a little off. You could say that the computers of the Active Control System are making the big mirror appear to be rigid, while in fact it is not. The Active Control System (ACS) is the part of the whole project that our software team is working on.

Now let's explore a little further how the ACS works. The ACS consists of twelve computers that read 168 displacement sensors on the 400-pound mirror segments and can move each of those segments around a little bit by means of 108 actuators. Each of the 36 mirror segments is attached to the support structure of the telescope by means of three actuators. These look like cylinders out of which emerges a piston that can move in and out a very small distance in highly accurate tiny steps. The body of the actuator is attached to the support system and the piston to the mirror.

The displacement sensors are mounted along the rims of all the mirror segments and measure the relative displacement between neighboring mirror segment fringes. These sensors are incredibly sensitive: they can measure microns of movement! Once I saw a sensor sitting on a heavy wooden table, all rigged up and ready to measure; I was leaning lightly on the table at least a few feet away from the sensor. It actually measured the 14 microns of tabletop flexing I had caused!

The computers basically tell the actuators what to do, based on sensor information gathered from the mirrors. Nine of the twelve computers are equipped to do very fast input and output from the sensors and to the actuators on the segments. At the same time, they do some digital filtering. The three remaining computers specialize in using all that sensor information in intricate calculations that produce proper actuator motion commands as a result. The Active Control System has a rhythm: it reads the 168 mirror sensors every 10 milliseconds, filters that information and then recalculates new motion commands for the actuators every half second. This is barely enough to keep the mirror in shape, but the theory says it works. The twelve computers we use are of the single board variety and are based on the Intel 68010 and 68020 chips, the same chip family used in the MAC computers. Our computers are small compared to a MAC: twelve of them easily fit in one nineteen-inch rack.

To do its job properly the Active Control System consults a large database kept in a Micro VAX computer. This database contains a set of Desired Sensor Readings; these are the sensor readings that one would expect the 168 sensors to produce (for a given telescope elevation and temperature) when everything is working perfectly.

Of course, it doesn't quite work as the theory says it should, so the computers compare the actual sensor readings with the desired ones and from the difference compute a set of motion commands to the actuators. This is at the heart of every control system: measure how far you are off, then make up for it, measure again. Oops! Make up for that one, etc. A true wild goose chase, as you can imagine, especially when the telescope elevation keeps changing and the steel support grid keeps flexing all the time. The control loop software works very hard to bring the

difference between actual and desired sensor readings to zero. It never quite succeeds, but it comes close every time.

Ah... I'm glad you asked: Where do those Desired Sensor Readings come from? Well, in the beginning they are not much more than a good guess about what they should be! In the first months of operation the telescope is therefore not exactly in focus. It sees 36 stars where there is only one! But then the Active Control System (ACS) begins to learn from experience. It does this by means of frequent calibration runs, while gazing at one bright and easy star. Calibration runs are all done under computer control. Over time, the database fills with Desired Sensor Readings for an increasing number of telescope elevations and mirror temperatures. The ACS grows more experienced by the day!

When the database is called upon to produce a Desired Sensor Reading for a particular elevation and temperature that has never occurred before then it makes its best guess, based on calibration results of elevations and temperatures that are not too far from the actual temperature and elevation. The ACS database gets better as time goes on, and the big mirror becomes more sharply focused given enough calibration runs.

Although the theory is simple, in fact, there are countless complications to be worked out and unexpected difficulties to overcome. In fact, it is such a vast and complicated project that it employs hundreds of highlyskilled people and will run for years and years. All this in order to give birth to this telescope, destined to unravel another deep layer of the visible universe, hopefully giving us many more clues to how the universe as we know it came about in the first place.

Will it work? Well, we'll see. At least some 400 scientists and engineers are staking their professional honor on it; they seem to believe it will work. Thousands of other experts are using their professional eagle-eyes to follow and review the project while it develops, no doubt the last-big-solid-glass-mirror Russians among them. But exactly how well it will work and how quickly it will teach itself to focus properly will only be known after 1989 when the computers and the electronics are moved "to the mountain," Mauna Kea, Hawaii, the 14,000-foot dead volcano on the Big Island.

By the time 1990 rolls around, the Ten Meter Telescope will have been assembled for the first time. All its 36 US-made mirror segments will be fitted in place and mounted on the steel support structure made in Spain, shielded by its observation dome. Pray the old volcano doesn't wake up.

At this time most of the software work is already completed, including my 3,000 lines of C-code with endless, endless bannerblocks, structure charts and other documentation, including operator's manuals, technical notes and what not. I'll leave the project in May 1989; only a few of my colleages will go with the computers and all the hardware to Hawaii to fight it out with the laws of nature till they get it right. What I will do next? Don't know yet. Maybe contemplate why I decided to be born a Dutchman, a topic Willis Cook keeps urging me to write about as part of his campaign to expand the editorial scope of Harold's great newsletter. Well, we'll see.

A Genealogical Management System for Home Computers

by Kenneth A. Miller

Finally there is a program for genealogists that covers all types of computer operating systems. In response to many requests for the last several years the Church of Jesus Christ of Latterday Saints (Mormon) has developed a useful genealogy program package for the many different types of computers. CP/M, MS-DOS, APPLE, and MACINTOSH. Interest in genealogy is one of the tenets of this church and they maintain one of the largest genealogical libraries in the world in Salt Lake City, with many branch libraries throughout the world. They offer a tested package called Personal Ancestral File (PAF). It is a system designed to simplify your genealogical record keeping. Developed and distributed by the Family History Department of the church, it is powerful and sophisticated, yet easy to use. Personal Ancestral File offers three unique programs: Family Records, Research Data Filer, and Genealogical Information Exchange (an enhancement of the GEDCOM program).

FAMILY RECORDS: The Family Records program lets you assemble your pedigree, at the same time compiling a wealth of genealogical information for each of your ancestors. You can enter the following information about each ancestor:

1. Name (surname and up to three given names)
2. Gender
3. Title, if any (Dr., etc.)
4. Birth date and place and/or christening date and place
5. Death and burial dates and places
6. Spouse, marriage date, and place of marriage
7. User-assigned ID number

Listed below are other features of the Family Records Program.

NOTES. PAF allows you to enter historical information or source reference notes for each individual--valuable background information every genealogist wants to keep.

STORAGE. Because you store your information on diskettes other than the program diskette, you can record information about an unlimited number of people. You are limited only by the number of diskettes you want to buy. For each diskette, the system assigns a unique number (called a Record Identification Number) for each of your ancestors, making it easy to retrieve information. You may also assign to each ancestor an ID number unique within your file.

FAMILY GROUPING. PAF lets you group families together, showing relationships between spouses, children, parents, and siblings for each generation.

PEDIGREE SEARCHES. As you enter more and more information and establish the links from family to family, the program also allows you to search your pedigree lines on a diskette and either display or print them in a chart.

PRINTOUTS. The program can print blank or filled-in pedigree charts and family group record forms in either letter or legal size. For Latter-day Saints, the program can also produce completed name submission forms for temple ordinances and also

lists of persons whose temple work has not been completed.

All of the information entered on any person can be printed out, including history notes.

RESEARCH DATA FILER: The Research Data Filer program can help you manage large volumes of original research data. Using this program, you can:

1. Document your information sources, including details about the author, publisher, book, page, and library where you found the data.

2. Search, sort, or print your information by event (birth, marriage, military service, death, etc.), place, date, name of person, or relationship to others.

The Research Data Filer does not teach you research principles or strategies. But it does help organize research data so that you can analyze it more effectively.

GENEALOGICAL INFORMATION EXCHANGE: This program is an enhancement of the GEDCOM program of Release 2.0, it can:

1. Convert all or part of your Family Records data to a transmission data format that you can send to another PAF user.

2. Interface with your own communications program to transmit converted data to or receive data from another PAF user.

3. Convert data received from another PAF user to the format for use on the receiving computer.

4. Prepare submissions on diskettes with names to be processed for LDS temple ordinances.

You can also use the Genealogical Information Exchange program to copy a portion of one data diskette onto another.

Included with the PAF program is also another experimental program called PAFUTIL. This program allows you to customize your forms that you want printed and also has some other special features:

1. Cascading pedigrees/family groups
2. Ancestry wall chart
3. Demographic anomalies
4. Surname frequencies
5. Relationship calculator
6. Soundex
7. Gregorian Date Calculator
8. Ahnentafel ID numbers

I have found the program to be able to do all the functions very quickly as it is written in C language. I have not found any bugs yet in the program and for those interested in how much information can be place in a 5 1/4 inch double sided diskette I have been able to have 1600 names with associated notes on 1 diskette and the disk is only about 80 percent full.

The complete package comes with a 3 ring binder and tutor-

ial. The price of the PAF program for any version is $35.00 (+ sales tax) and may be ordered from:

Salt Lake Distribution Center
1999 West 1700 South
Salt Lake City, Utah 84104

CP/M(KAYPRO) VERSION #PBGS 1358
Requirement: 2 disk drives, CP/M 2.2, 64K memory, printer

MS-DOS release 2.1 (5 1/4" diskette) #PBGS 1642
Requirement: 2 disk drives, DOS 2.0 or above, 320K memory, printer.

MS-DOS release 2.1 (3 1/2" diskette) #PBGS 1802
Requirement:2 disk drives, DOS 2.0 or above, 320K memory, printer.

Apple Version #PBGS 1187
Requirement:(Apple II+,IIe,IIc, 2 disk drives, Apple DOS 3.3,48Kmemory, 80-column board, monochrome monitor (80 column format requires monitor instead of a television set), printer.

Macintosh version (available 3rd quarter 1988) #PBGS 161A
Requirement:Macintosh 512, 512e, Plus, SE,II. 2disk drives if single-sided, 1 disk drive if double-sided,512K memory, printer.

Apple Version release 2.0P (avail. 3rd quarter 1988)#PBGS 1653
For Apple IIe, IIc, IIgs
Requirement: 2 disk drives (2 floppy drives or 1 floppy and1 hard disk drive), ProDOS operating system, 80-column board,monochromemonitor(80 columnformatrequiresa monitor instead of a television set)., printer.

Address inquiries about system requirement of these versions to:

Ancestral File Operations Unit
Family History Department
50 East North Temple Street
Salt Lake City, Utah 84150
(801) 240-2584

IN MEMORIAM

Dennis Becker

I've already said I mourn those past members who don't show up at the User Group Meetings any more. Today, I heard (many weeks after the fact) that Dennis Becker died in October of lymphoma, a type of cancer.

Dennis was an intense and opinionated person and so he certainly made his mark on BAKUP meetings and on the newsletter when he was its editor.

I count as his main accomplishment in BAKUP the work he did with the BOOTSTRAPPERS, a special interest group for beginners. He was one of the prime movers in getting that group started and moving.

Since he was a younger man, having many interests and activities, I am sure he will be missed for more than his contributions to BAKUP, but someone in the far distant past told me that it does not matter how many children you have to carry on the family name -- your real legacy is in the people whom you have taught. Dennis certainly left a legacy he could be proud of.

—Bob Athey

Not that I knew Dennis very well, just well enough to work on the newsletter with him, but I do know that he was a platoon leader in Vietnam. The men in his platoon were usually new recruits who needed, I gather, some looking after, and this was his responsibility. A large part of war is just standing and waiting, or marching from here to there and back again and he told me once that part of his job was to convince his new arrivals not to dump their ammunition in order to have more room for rations, candy bars and cigarettes. He lived in fear that they would suddenly find themselves in a hot situation with only gum and cigarettes in their ammunition belts. He also told me that he missed the intensity, the comradeship, the utter loyalty and trust, that he found in Vietnam under fire, and that it was something he knew he would never find in civilian life. I've heard other vets say the same thing. After he came home, he spent a couple of years as a counselor, helping other vets readjust to civilian life. He never expressed any bitterness whatsoever about the war.

—Sunday Von Drasek

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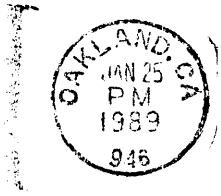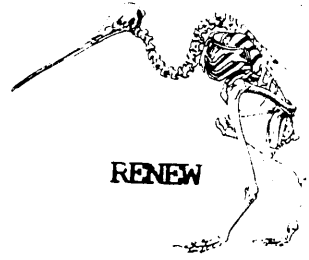
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