

WORDPLAY

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PUNN

The PUNN Newsletter - Portland, Oregon
January 1988

Where do We Go from Here?

Why, onwards and upwards, of course! I am continuously amazed and gratified at the level of support I see for the TI, long after TI pronounced it a failure and decided to pull out of the market. We are still seeing significant support from both vendors and users of the software and hardware we need to continue to have fun with our systems.

Just recently I have seen updates to Funnelweb (to version 4.0), John Birdwell's great disk manager (and more) program, new hardware is being announced, old hardware is being revived in the marketplace and people are still having FUN with the computer.

The recent release of WOODSTOCK is one of the finest examples of what can be done on a TI that just delights the eye and mind. I've set seven simple goals for the next year. They all revolve around the simple idea of enjoying what we already have and perhaps improving a few things.

THEY ARE:

1. Retain Our Members:

To accomplish this, we need to make our meetings interesting, providing something for everyone.

2. Recruit New Members:

A strong membership is our lifeblood. There are still an amazing number of people out there who have TI's who don't even know about us.

3. Get More Involvement by Members:

The Users Group is for and BY members. To avoid stagnation of ideas, we need for many more of YOU the members to get involved with the operation of the group.

4. Have a Disk of the Month:

No secret here! Our library is our STRONGEST fund raiser, outside of membership dues, and this gives us the funds to pursue some of the fun things we want to do as a group.

5. Get more involved with the TI Community:

We have long had members from the Vancouver and Salem areas. We need to encourage stronger inter-group relations with those groups.

6. Get more involved in the Local Community:

We, as a group, are some of the best people in the Portland Metro area. As such, I feel we should take on a small but meaningful community service or charitable activity at least once during the year.

7. Have FUN!:

Explore our computer as far as we can. Set out to learn something NEW each month. That's what the computer was all about for lots of us, in the first place. Let's not lose sight of that goal. There are no doubt several things I've overlooked. For instance, I'm particularly interested in the continuing development of the BBS. Perhaps some others would like to get involved in these or other aspects of the Users Group. The neat thing is that we all share this great common interest. Let's take advantage of it this coming year and HAVE FUN!!

--Al Kinney

News and Views

There is going to be another drawing this month for a lucky PUNN member! -- So you better come, the lucky member might be you. -- The regularly scheduled board meeting on Tuesday December 15th was rescheduled Monday December 21st because of the weather. -- This month's newsletter contains offerings from three active members who will be next? -- Al Kinney our newly elected President outlined at the board meeting his plan

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A User's Opinion

Much has been made of the failings of the FAIRWARE concept, mostly by software authors who feel they have been taken advantage of by the ungrateful TI community. I'd like to present a slightly different side of the same story, as food for thought.

I've gotten probably 20-30 FAIRWARE packages over the past couple of years, and have paid for four of them. Not a very good average, if you consider the pure percentages. Why have I been so niggardly? Well, for one of two reasons...1) the software was AWFUL!; or 2) I had no need for the particular software.

Let's talk about the second case, first. There are several Sector Editor programs, as an example, none of which did everything I wanted, and I had other software that I considered just as good. There are lots of interesting variations on a theme, but they are just that...variations on a theme. There are several other examples of software that, while interesting, doesn't fit my particular requirements. Many of these programs have been downloaded from COMPUSERVE, or other BBS systems. Some authors have the mistaken opinion that if I download it, I should pay for it, immediately. After all, it IS now in my library. I would feel compelled to agree, if I plan to use the software, or if in the future I should decide to use it. However, because I've downloaded it doesn't make me want to use it, once I have it.

Going backwards now, let's talk about some of the other kinds of software. For example consider a checkbook program that gives incorrect results, or which "blows up" if I hit the wrong key. Crummy programs get nothing from me. Just because someone uploads a file to a BBS or COMPUSERVE doesn't make it a good program, and I have pulled some down that lacked even rudimentary error checking, so it was possible to cause the program to crash after you spent half an hour doing a

set-up and loading data. This isn't the kind of software for which I expect to pay good money.

So, given those thoughts, there are certain programs I think are definitely worth paying the author's requested "donation". I send off a letter and a check. Does that end the transaction there? I think not. This is where my gripe is. When I decide a program meets my requirements and I pay my money, I'd like some acknowledgement from the author that they have received the funds and have added me to their "registered user" list, for future updates, etc. However, for some reason, very few authors seem to do this. I've downloaded upgrades for Fast-Term from CIS, received upgrades for Archiver II from friends and NEVER heard so much as "Thanks!" from the author. I guess I never thought too much about it, until recently, when I got very excited about John Birdwell's DSKU disk utility. I had the program about 1 hour, and decided this was one of those that had to stay in my system, so I sent a check, and a letter, out that night. To my surprise, and delight, less than two weeks later I received a letter (I suspect a form letter, but nonetheless a letter) from John AND a diskette with the most recent revision of the program. John detailed his upgrade plans and explained how I could go about receiving future upgrades.

"Now, this is the right way to do business!", I thought to myself. Since the FAIRWARE author has decided to bypass the normal expenses of advertising, distribution and updating, any money they receive is pure profit. Nothing wrong with that, but at least one author has the class to acknowledge the paying customer. You can bet, if John has another program that I need, I'll come back to his "store"! And, if I think of a good program, I'll ask John first, before I ask someone else to create it.

Computer Careers

For those who want to turn their computer hobbies into careers, Source EDP, a California-based recruitment firm, has some good news.

Entry level salaries for non-management positions, such as programmers, software engineers and analysts, ranged from \$21,700 to \$27,000, according to Source EDP surveys. These salaries can increase to \$42,000 or more with five years experience.

Starting salaries for programming managers, data center operations managers, computer systems directors and the like range from \$28,000 to \$42,000. If applicants have some experience, those figures can shoot as high as \$66,000 to \$80,000. Starting salaries for sales representatives average \$23,000 and rise to about \$40,000 with experience.

Trends in technology and computer careers are diverse. For instance, the use of microcomputers within businesses has vastly expanded in just a few years. In 1975 there was virtually no market for micros in business, but industry analysts predict that sales of micros for offices will top \$300 million by 1995. Career opportunities emerging because of this are in software development, programming, marketing and marketing support for vendors of mini and

microcomputers.

Another trend, according to Source EDP, is for the computer professional to become more specialized. As corporate computing needs become more sophisticated, many firms need specialists in such areas as systems programming, security analysis, quality assurance and hardware/software analysis. Industrial automation--making robots that make things--is another growing area.

In spite of the promising numbers, there are more computer professionals in the job market, allowing companies to be more selective.

Source EDP offers a free booklet to the computer professional looking for career development opportunities. To obtain a copy, contact Source EDP, P.O. Box 7100, Dept. PD302, Mountain View, CA 94039: 415/949-2688.

*
* Murphy's Rule: *
* *
* Never eat prunes *
* when you are famished. *
* *
* *

Obsolescence

Webster's dictionary defines obsolete as something that's no longer useful. But the personal computer industry has a very different definition. When personal computer makers and software companies talk about obsolete, they're referring to products that are no longer the newest and greatest. And, because technology in the computer industry advances at breakneck speed, those products could be just a couple months old. Personal computer vendors update their machines frequently - sometimes several times a year.

But that doesn't mean older products are obsolete.

Just ask Henry Forfa.

Forfa, president of Boulevard Lunch Service, a New Jersey company that distributes food to lunch trucks, runs his entire business on two Processor Technology Sol Computers - a forerunner even to the Apple personal computer. But Forfa doesn't consider his Sols obsolete. "I run these machines from 9:00am and they don't stop until 6:00pm at night," Forfa says. "They're constantly processing information."

Forfa bought his first Sol in 1978. The machine has only 48 K of memory. (Same as an expanded TI.) But he manages to do almost all of his invoicing, inventory control and production work on the machine.

"I could never have been in the position that I am today without this machine," Forfa says. "The only reason I'm considering using new computers is that you can't get parts for my Sols. It's sort of like running an antique car."

Forfa did buy two new personal computers, IBM's PC XT, but those machines have been sitting around for two and a half years. "I can't program software that does what I want," he says.

Forfa isn't unique. Nearly every computer users group in the country lists members still using what are now known as obsolete computers - products made by companies now no longer in business or products that are several versions old.

These people continue to use their machines despite the common perception that they are obsolete products. That perception is often promoted by the personal computer manufacturers themselves.

"WE might give people the idea that they've got to keep buying new products and upgrading," says one executive with a major personal computer company. "It's not a conscious thing. But the technology keeps advancing, and we want our products to keep advancing, too."

Some industry insiders do their best to dispel the idea of obsolescence.

"This whole myth of obsolescence is ridiculous," says Gordon Hoffstein, president of Microamerica, a company in Waltham, MA, that wholesales all sorts of personal computer products to computer dealers throughout the United States. "Every product on the market is technically obsolete the day it comes out, because somebody else is improving the technology."

Key to deciding whether or not a personal computer is obsolete is determining whether it does what the user wants it to do," Hoffstein says. "There is a difference between technical obsolescence and functional obsolescence," he says. "If you have a 1985 car, is it obsolete when the 1986 models come out? Absolutely not."

Technical obsolescence, for instance, might mean personal computers that run an older operating system called CP/M. Most of industry now uses a newer updated operating system called MS-DOS. (Operating systems are a set of programmed instructions on a computer that allow the software to work with the hardware.) Users who still run CP/M machines may have some trouble finding software.

Technical obsolescence can be overcome in some cases by adding additional products, call add-ons, to personal computers. A healthy add-on industry made up of companies marketing products, such as external disk drives for more storage, boards that add memory, boards that improve a computer's graphics capabilities, and other similar products have sprung up in recent years.

Functional obsolescence, on the other hand, means that user simply outgrows the machine. He may want more storage for his data, or a personal computer that runs faster.

Until a user finds himself in either situation, his computer and software products - no matter how old they may be - are just fine.

"Obsolescence is a thing that happens between an individual and his computer," says Alex Randall, president of the Boston Computer Exchange. "It isn't obsolete because a new piece of equipment comes out. It's obsolete when the individual says it doesn't do what he wants it to do any more."

So will your computer become obsolete? Eventually yes, but if you are using it as a tool in your business it will last as long as it performs the function you purchased it for.

(This article originally appeared in an advertising supplement to the New York Times in November 1982. It was prepared by members of the staff of CMP COMMUNICATIONS INC. of East Brunswick, NJ.)

Electronic Typewriter

This program is not a "Super Duper Word Processor", in fact, it's not even anything close to that. But in continuing our discussions with easy to use programs that turn your printer into an electronic typewriter, this program does quite nicely.

Here is what it does. After you load in the program you will be presented a screen with a stationary cursor in the middle of the screen. You are allowed to print a width of 80 characters (2-40 column lines on your screen). You can adjust your lines, check

your spelling and whatever else before pressing ENTER to print out the line. Each time you print out the line, your cursor is returned to the beginning of the next line to be typed in. The old line will still be there, but you will be typing over this old line when the new line is being typed in. This is an advantage if you are typing a line of less than 80 columns as you will be able to identify where your typing is to begin and end.

It's not all that long a program. It (continued on page 5)

Mail List

I was running through the newsletters that we exchange with other clubs the other day and I found a program that may be useful to many of you.

We have members in the club that use cassette recorders for storing programs and sometimes I feel guilty for not addressing more of their needs.

This program is easy to type in and use and will provide a mailing list and a means of printing labels. It requires the PRK module (Personal Record Keeping) and naturally a printer to print the labels.

However you will find it much simpler to use than some of the more sophisticated programs like FBase. You can store some 150 names depending upon how you store the data when you enter PRK. When you plug in the module you need to set up your file with the following 7 recommended fields. However you can set up your fields any way you like and that will affect how many records you can store.

- #1 FNAME (use 11)
- #2 LNAME (use 13)
- #3 ADDRESS (part 1) (use 9)
- #4 ADDRESS (part 2) (use 9)
- #5 CITY (use 12)
- #6 STATE (use 2)
- #7 ZIP CODE (use 5)

After you have set up the fields and entered the appropriate data, you should save in the usual manner, disk or cassette. Then exit PRK and go to "PRK BASIC". You must now in the immediate mode type: CALL P(10000). This allocates space in the VDP ram so the PRK subprograms can manipulate the data files. If a disk drive is attached, then CALL FILES(1); then type NEW (for both CS1 or Dsk). Then load this PRKLABELS program and run it.

The program reads the files and outputs them to the printer. Some of PRK functions are slow as compared to FBase but the advantage is a simple program that works. You need just a functional knowledge of PRK to use the program.

```

100 =====
110 REM#PRK-LABEL PRINT#
120 REM#VER: 1 9/85#
130 REM#by Arthur Byers#
140 REM# Shrub Oak, NY #
150 REM# 914/528-5402 #
160 REM#=====
170 REM# #
180 REM#PRK Module aust#
190 REM#be installed #
200 REM# #
210 REM#=====
220 REM# THIS PROGRAM IS TAI
LORED EXACTLY TO A KEY FILE
WHERE ITEMS 1-7 ARE STRING C
HAR
230 REM#1=FNAME 2=LNAME 3=AD
DRESS PART 1 4=ADDRESS PART
2 5=CITY 6=STATE 7=ZIP CODE
240 REM#The key files are be
st made out using the PRK mo
dule.
250 REM# # # # # # # # #
260 REM#>From the title scre
en call up TI BASIC then in
the immediate mode type in:
270 REM#>CALL P(10000)
280 REM#IF DISK DRIVE ATTACH
ED THE >CALL FILES(1)
290 REM#>NEW (FOR BOTH CS1 A
ND DSK)
300 REM#Then OLD this progra
m and :-: >RUN
310 REM#>IN WITH MENU
320 CALL CLEAR
330 CALL D(8,12,4,"MENU",10,
1,22,"FCN/5=LOAD PRK FILE",
1,1,21,"FCN/6=PRINT LABELS
")
340 CALL D(12,1,13,"FCN/7=E
XIT",23,1,13,"ENTER CHOICE "
)
350 CALL A(23,14,1,V,W#)
360 ON V GOTO 330,350,790,35
0,540,380,350
370 REM#LOAD the file create
d using PRK
380 CALL CLEAR
390 CALL D(6,1,28,"NAME OF F
ILE TO LOAD?",8,1,9,"Examp
le s: ",10,1,3,"CS1",11,1,14,"CS
K1.FILENAME")
400 CALL A(14,1,14,V,FN#)
410 CALL L(FN#,V1)

```

```

420 IF V1>0 THEN 470
430 CALL CLEAR
440 PRINT "LOADING ERROR RED
0"
450 GOSUB 860
460 GOTO 310
470 CALL CLEAR
480 REM#read the "HEADER" fo
r number of pages in the fil
e NP=number of pages
490 CALL H(1,6,X,NP)
500 CALL D(10,1,28,"LOADING
COMPLETE")
510 REM#JB 860
520 REM#JB 310
530 REM#PRINT LABELS
540 CALL CLEAR
550 CALL D(5,1,19,"ENTER PRI
NTER NAME:")
560 CALL A(12,1,28,V,PDV#)
570 OPEN #2:PDV#
580 CALL CLEAR
590 CALL D(10,1,28,"ARE LABE
LS PROPERLY ALIGNED?",12,1,2
6,"((PRESS ENTER WHEN READY
))")
600 INPUT E#
610 CALL CLEAR
620 FOR J=1 TO NP
630 FOR K=1 TO 7
640 REM#reset value of V# to
a null string
650 V#=""
660 CALL G(1,J,K,X,V#)
670 A$(K)=V#
680 NEXT K
690 PRINT #2:A$(1)&" "&A$(2)
700 IF A$(J)="" THEN 720
710 PRINT #2:A$(3)&" "&A$(4)
720 PRINT #2:A$(5)&" "&A$(6)
730 PRINT #2:A$(7)
740 PRINT #2:" "
750 NEXT J
760 CLOSE #2
770 GOTO 310
780 REM#EXIT
790 CALL CLEAR
800 REM last chance to chang
e your mind
810 CALL D(10,1,19,"EXIT PRO
GRAM? Y/N N")
820 CALL A(10,19,1,V,YN#)
830 IF YN#="" THEN 310
840 END
850 REM#DELAY SUB
860 FOR I=1 TO 700
870 NEXT I
880 RETURN

```

Amaze!

Here is a way to amaze and frustrate your Atari, Apple, VIC 20 and other Color Computer friends. Type in the following program (you can either use command mode or make a simple one line program. It requires XBasic.

```

1 CALL CLEAR :: CALL SCREEN(
5):: CALL MAGNIFY(2):: FOR I
=1 TO 28 :: CALL SPRITE(#I,6
4+I,16,80,80,3*I,8):: NEXT I
:: FOR J=1 TO 5000 :: NEXT
J :: GOTO 1

```

When it's loaded just hit ENTER and watch all 28 sprites do their thing. The way the program is written it will continue until you break the program.

(more NEWS & VIEWS from page 1)
elected President outlined at the board meeting his plan for PUNN for 1988-It contains many exciting features for a successful club year- -Save your NEWS-APERS!-We're planning another collection in February-this is an important money maker for the club and your participation helps- -Have you downloaded Woodstock from the BBS yet?-If not you will want to see what a remarkable program this is and fun for all to see- -The program and workshop this month will include how to use "DISKU", by John Birdwell and "BOOT ARC" by John Johnson-both programs are disk utilities and will include many ways to improve the usefulness of your TI- -More fine programs are planned for the coming months- -The entire slate of officers and board members wish you and yours a most 'HAPPY NEW YEAR'- -We'll see you on January 5th.

Bits and Pieces

For all those who are just getting into TI-WRITER here are a few tips to make the TI manual a little easier to understand and to get you started writing letters and reports from the word GO:

- TI-REWRITE by Dick Altman in just 5 pages just about covers everything in the 175 pages of the manual. He also mentions two other sources of interest.

- TI-WRITER BUGS by Dr. Guy-Stefan Roman outlines pitfalls the beginner is sure to stumble into sooner than later. This one is only 2 pages long.

- TI-WRITER HELP by Tom Kennedy is a 5 page summary that covers the basics plus some supplementary comments to the references above.

- TI-WRITER COMMANDS by the Will County, Romeoville, IL TI Users Group has put on 1 page all the most used commands for handy access at your computer.

Admittedly, the TI manual has it all but you will find these 13 pages (is that lucky?) and a few hours practice will get you started much quicker and will help you understand what the manual was trying say (sorry about that TI)

I am ready for but have not been able, as yet, to get a copy of TI-WRITER TIPS & TRICKS by Joyce Corker. This booklet is not a beginners guide but a collection of methods and techniques on how to get the most out of your word processor.

Bill McCabe

Election Results

The election of officers that will serve PUNN during 1988 was held at the December 1987 meeting.

Al Kinney will serve as President; Dale Kirkwood as Vice-President; Don Barker continues as Secretary; and Chuck Neal will be Treasurer.

Congratulations to these new officers and they encourage all the members for assistance to make PUNN better than ever.

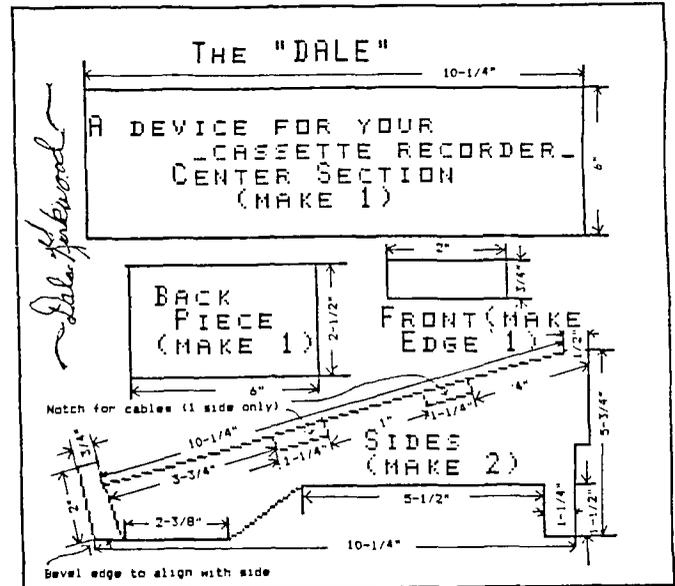
Newspapers Wanted

PUNN will be holding a "Newspaper Drive" for the February meeting. Start collecting you papers now. This is an important money making project for our club. The funds collected help us maintain valuable services such as the BBS and the Library for the membership. Bring you papers to the February 2nd. meeting. There will be a truck in front to deposit them.

"The Dale"

We have among us a very talented person, who has devised a method of placing your cassette recorder next to your console.

All you need is a few small pieces of 1/4" plywood, some screws and glue, and in an evening you can construct this holder which will go over the "fire-hose" and speech synthesizer.



The recorder will be at an angle, so you will have a good view of the tape as it is recording or playing back. When you eject the tape it will practically jump into your hand.

You can vary the dimensions shown in the drawing to suit the particular brand of recorder that you have. If you need additional assistance, contact Dale Kirkwood and he will be glad to advise you.

You will need about a dozen #6 wood screws and some glue when you have cut out all the pieces. When you are finished you can either paint or stain and varnish the stand. Get four rubber feet and fasten them to the bottom of the stand to complete the job.

Dale furnished your editor with a rough drawing of the project who then used the Draw 'n Plot feature of Super Extended Basic to produce the included diagram. The drawings are not truly to scale due to the lack of mechanical drawing knowledge of your editor, but I believe you will be able to figure out what is intended.

(continued from page 5)

nally asks you to press any key to continue. That is the reason for the blank line in your file.

Now press the spacebar again and the BBS will ask for your ID#. Another press and a request for your PASSWORD. A final press and you are ready for anything you want to do on the board.

Pressure can't be all that bad-
Look what it does for GRAPES!

Ram Disks

We have a problem as TI-99/4A users these days that most market viewers and many TI owners would not have believed possible just a few months ago. There are four major vendors of RAM DISKS in the U.S.A. There is also a variety of features and sizes in these units, some of which are not found in units being produced for Atari, Commodore, Apple, or the P.C. lines of computers. The biggest problem facing the user now is "which to buy"?

The purpose of this article is to provide some thoughts and facts to help you decide. The next several paragraphs are not intended to promote any one of the RAM DISKS mentioned, and may contain erroneous information, hopefully by omission rather than commission.

First a RAM DISK is by definition, a software/firmware supported RAM circuit board emulating a DISK, i.e., a circuit card, that when plugged into your PEB, will allow you to store and retrieve disk type files to/from the unit with the same ease as you would to your physical disk drive (DISK1, for example). Because RAM is a non-mechanical device, it is not subject to the delays of positioning a read/write head over a cylinder (TRACK), and waiting for the diskette to now rotate to the desired sector, and then read/write data from/to the spinning disk in serial (like cassette) form. These three mechanical limitations are the main reason that disks are slow. Yes, disks are about as much faster than cassettes as RAM DISKS are faster than disks! If you buy one, YOU WILL enjoy that kind of improvement, no matter which brand you buy.

The major two types of RAM DISKS are those using DYNAMIC RAM (MYARC, CORCOMP) and STATIC RAM (HORIZON, MIKE BALLMAN enhanced HORIZON (sold by Bud Mills)).

*DYNAMIC RAM is less expensive, larger capacity, but requires more support circuitry, draws more power, and is more cumbersome to support if the power is lost (like turning off the PEB).

*STATIC RAM is lower power and thus easy to support during power outages. They are more expensive, take more space on a board, and thus for the amount of memory needed, more expensive than DYNAMIC RAM.

I would like to talk about additional features. The first one that I am most asked about, is the spooling features. All but the HORIZON and the enhanced HORIZON have the spooling feature. At this printing, all that have spooling do it in a different manner, but just as effectively. Some of you may ask "What is spooling"? Well to make it simple, spooling is storing data that is to go to a device (printer, modem, etc) in memory space and releasing it as it can be used by the receiving device. Remember the TI sits there sending to the printer until all the file is sent. Then it is able to accept your next command or continue instructions. A spooler accepts this information as if it were the printer, modem, etc and at a much higher rate than any of these peripherals could, and in most cases will accept the entire file to be processed in a few seconds versus several minutes. The TI-99/4A will then ASSUME that all it had to do was done and come back to you for further use, when in fact the job is still being completed by the spooler at a pace the printer, modem, etc. can handle it. Pretty neat!, Huh?

Another feature is partitioning, or multiple disks being assigned within a single RAM DISK CARD. What this means is that if you have a single drive on your system (DSK1, for example), you may call a portion of a RAM DISK, [2], or 3 or 4, etc. Now you have one physical, and up to who knows how many other disks which are part of the RAM DISK.

Still another feature is built in COMMANDS, each disk mentioned above has its' own set. For example, you can type "CALL DM" in BASIC COMMAND MODE, and a file called DM1 will be booted from the disk, followed by DM2. Many commands dealing with memory are also incorporated.

Features such as CLOCK, (Time of Day), Analog-to-Digital, etc are now becoming available to the RAM DISKS.

It is our hope that this article will give you a general idea of RAM DISKS and you will delve into the subject in greater detail.

John F. Willforth
Pittsburgh Users' Group

TI-XPO-88

The Southern Nevada User's Group in Las Vegas is planning a TI-XPO-88 on February 27th and 28th 1988. There will be Door Prizes, Guest Soeakers, Programming Clinics, Demonstrations, Hardware and Software Vendors and much more.

Special discount airfares have been arranged with Pacific Southwest Airlines (PSA). The special fares are available from February 25th until March 2nd. They are totally free of restrictions and can be either cancelled or changed within the time limit. If you plan to go, mention the special code that has been assigned for this event. (SMILE NUMBER M1586S). The Toll Free number for PSA is 1-800/435-9772

The event is being held at the Palace Station Hotel & Casino in Las Vegas. You can

call their Toll Free number for hotel accommodations (1-800/544-2411). Again mention the TI-XPO-88 for the special rates.

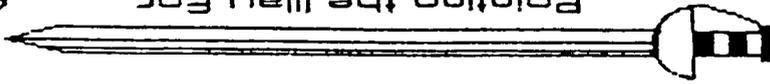
The officers and volunteer workers who are planning this show are going all out to make it one of the better TI fairs. They also suggest that you tie in the show with some additional time to enjoy the sights, sounds and activities in Las Vegas. If you want additional information about TI-XPO-88 you can call or write. The S.N.U.G. address is P.O. Box 26301, Las Vegas, NV. 89126. Or you can call either 1-702/647-1062 or 1-702/878-3167.

If you have never attended a TI-Faire before, this would be a good one. If you don't buy a thing you'll come away with a lot of additional information for your TI-99/4A.

January 1988-Volume 7-No.1

Users of TTS 994/R Computer

Pointing the way for



P.O. Box 15037 Portland, OR 97215

WORDPLAY

The PUNN Newsletter

ALL GENERAL MEETINGS ARE HELD
ON THE FIRST TUESDAY OF EACH
MONTH, AT THE PCE BUILDING
3700 SE 17TH AVENUE
PORTLAND, OREGON
|| NEXT MEETING DATE ||
JANUARY 5TH, 1988

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