WORDPLAY

The PUNN Newsletter Portland, Oregon

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MURPHY'S LAW:

There is never time to do it right,
but there is always time to
do it over.

‡‡‡

From the President

In spite of some wrangling and arguing at the last board meeting, it became clear that some of the "DOERS" are getting a little frustrated with folks who sign up to do things for the group and then don't deliver! Remember, the jobs that we have in PUNN are volunteer jobs, and nobody is twisting your arm. If you run for office or accept an appointment to chair a committee, please, follow through! We're counting on you!

If you think you can't or don't want to do the job, SAY SO! We'll understand and find someone who WILL carry on. We all know it's a burden to come to board meetings, when the weather's nice, but please let us know so we can go about finding a replacement so the Group's business is looked after. Mike Calkins has taken the ball, and is going forward to get our Tax Exemption status cleared up, once and for all! Mike, you have earned a spot in PUNN's history!

Don't forget to come to the July meeting, and that it will be a week later and at a different location. Due to scheduling conflicts, we had to get an alternative location, and old standby, Ron Mayer came through again! Thanks, Ron! Also, be sure to get your picnic tickets EARLY this year, so we can get a headcount. It will be at a new location this year due to a seemingly arbitrary doubling of cost by the Milwaukie Elks Club. Once again, Ron has jumped in and found us a great location in Sellwood park. More information to follow in other parts of the newsletter.

We're still waiting for the return of the Myarc HFDC (Hard disk controller) so we can get to work on the implementation phase for the BBS. We hope to get the hardware ironed out and working fairly shortly (early fall!) and then begin work on new software to support the capabilities of the drive.

We wonder what YOU'RE doing with your TI, these days. It would really be neat to see a regular column in the newsletter, each month, from members, telling about their use of the system. Boring, you say? What seems routine to you may be inspirational or exciting to someone else. Why not give it a try! Send Chuck Ball a file on the BBS, in a disk or even on paper! I know he'd take care of the editing and spelling errors and make room for it! The key to continued success and vitality for the User's Group is the first word ... USERS! Share your thoughts, ideas and problems!
                              --Al Kinney

News and Views

We saw a lot of PUNNER'S on the Navy ship 'Kansas City' when it departed the seawall after the Rose Festival---Walt Morey, Ron Mayer, Al Kinney and his wife, Don Barker and Chuck Ball along with his wife and grandaughter, were their others that we missed?---There is going to be a change in the meeting place for the July meeting-the first Tuesday is July 4th, so we have arranged a different location, see the attachment to your newsletter for particulars---The PicNic in August has been changed to a new location-Sellwood Park in Sellwood-see the next newsletter for complete details---A new list of BBS numbers has been downloaded-check it out for your favorite---Remember we always need to get new members, talk TI wherever you go---Library fees help to support your club, whenever you purchace a disk it keeps the club treasury healthy---The Barry Traver "Diskazine-Vol 2, #4 is available along with any past issues-if you have not tried out this great series you can get them from the Editor for $6.00 per issue---Rich Gilbertson advises that the updated WINDYXB is available to download on the BBS and it will be reviewed in an early edition of 'Micropendium'---We are sorry to hear of the auto accident of Jack Sughrue (PLUS Disks)---We wish him a speedy recovery---No TI Faire in Seattle this year-how about Chicago in November?---Call the Editor, you'll find his number on the front page, with late news-We do want to hear from you------

Orphanage

(The following article was inspired by a like story in the Boston Computer Society, TI Group.)

Come this next October, we will have been in the 'Orphanage' six years. That's a long time to enjoy an unsupported computer system that does anything the big guys can do with their computer, and on a home computer budget.

But how many years can all of this keep up? Every year, it seems there is something new, but the well must be running dry. MYARC did the GENEVE. They did the Hard and Floppy Disk Controller. There are Artist programs, word processors, data base programs, telecommunication programs, spread sheets, in short every software area has been covered. Take MACFLIX for example; there's a real good advance: if we can't draw an 80 column picture, MACFLIX lets us print pictures from a computer that can. We have RAM DISKS and 80 col-

umn cards for the screen like DIJIT and MECH-ANTRONICS. We can run 80 track disk drives—that's 2880 sectors per disk!

But how long can we keep up, you ask? We're thinking a long time. The 99/4A system can do anything you need a computer at home to do including transferring PC work from the job and back again. Printers today allow you to unlock graphics and a Ram Disk will increase memory storage.

The one thing missing perhaps is "raison d'etre", (a reason to exist). We need to continue our efforts to promote our computers and invite others who have laid their equipment on the closet shelf. We also need to support fairware authors and commercial producers if we expect to see more programs.

But even if the bottom of the barrel is close there is no need to panic. Support the market and the market will support you.

Hall of Fame

We wish to nominate these three individuals to the TI "Hall of Fame". The following list is courtesy of the User's Group of Orange County, California and receives our hearty endorsement.

TONY AND WILL McGOVERN: These two residents of Austrailia are best known for Funnelweb. This program has been proclaimed by some as the "most significant program ever written for the TI". Based on TI Writer, it adds features and abilities consolidated into one program. It is, simply put, an entire operating environment that will support just about any disk based TI application.

They have tweaked TI Writer and added new control keys, a better character font on the screen, faster word wrap and much more.

The McGoverns have also contributed to the TI knowledge base. Their newsletter articles cover many areas of interest for Extended BASIC and Assembly programmers.

BARRY BOONE: Barry has taken Barry Tra-

ver's Archiver from a basic program to one that is truly "elegant". The operation of Version 3.02 is simple but comprehensive. Once you understand the function of an archiver program, the learning curve is almost flat.

The availability of an archiver is a key element in the electronic network that helps support the TI. Barry has also written many other fine programs.

JIM PETERSON: This gentleman has given of himself unselfishly to those of us who use the TI extensively. His "Tips from the Tigercub" have appeared in almost every TI newsletter. You may not know this, but Jim distributes his material free of charge. He regularly send care packages out to TI clubs at his own expense.

His "Nuts and Bolts" disks are full of programs, large and small. If you can think of a Basic or XBasic program, Jim has probably written it. Every one of his offerings is first rate.

Program for July

This month we're going to see a comprehensive demonstration of the BBS. Many of us use the BBS, but are we taking full advantage of its many features? Probably not, so you'll want to come to this meeting.

After the program, the workshop portion of the meeting will continue with the BBS and you'll have the opportunity to do some hands on work with it. Fast Term and Telco will both be demonstrated. Both of these programs do a good job with our Bulletin Board and it's a toss-up on which one to use.

We'll mention again here that there is a change in both the place and date of the meeting due to the 4th of July occurring on our regular meeting night. (See the enclosed flyer.)

If you desire to have a particular program or subject discussed at a future meeting, give Ted Peterson a call. He'll schedule it for a future meeting night.

This Could Be You

What are you doing with your TI these days? You may have discovered a use for it that could be of interest to others in our group and for that matter TI'ers across the country with whom we exchange newsletters.

We want to hear from you, no matter how simple or complex your idea may be.

Get your ideas together and send or give them to the editor for inclusion in a future edition of 'WordPlay'. This could be a regular feature of our newsletter and every member can be a part of this important contribution to the use of our computers.

"It's good to be a man of few words---You can never tell when you'll have to eat them."

Copyright

NOTE FROM THE EDITOR: We have seen a number of claimed copyrights and would like to publish the following. We found it in the User's Group of Orange County newletter and pass it along with some updated information.)

There are some people who have written programs and declared them to be copyrighted without having registered them with the Copyright Office. To declare an item as copyright without registration is a punishable offense. Without registration they have no valid copyright. An unregistered "copyright" has no force in court. That is, someone could copy and use the program and would not be liable in a lawsuit. In fact, a person who claims a copyright without registering it may find himself in trouble should he try to sue an "infringer". He could be fined by the Copyright Office and the so called "infringer" could counter sue for damages.

The information on the following sections are verbatim extractions from the Copyright Law (Public Law 94-553).

Section 106. Exclusive rights in copyrighted works. Subject to sections 107 through 118, the owner of copyright under this title has exclusive rights to do and to authorize any of the following:

(1) to reproduce derivitive work in copies or phonorecords;

(2) to prepare derivitive works based upon the copyrighted work;

(3) to distribute copies or phonorecords of the copyrighted work to the public by sale or other transfer of ownership, or by rental, lease or lending;

(4) in the case of literary, musical, dramatic and choreographic works, pantomines and motion pictures and other audiovisual works, to perform the copyrighted work publicly; and

(5) in the case of literary, musical, dramatic, and choreographic works, pantomines, and pictorial, graphic, or sculptural works, including the individual images of a motion picture or other audiovisual work, to display the copyrighted work publicly.

Section 107. Limitations on exclusive rights: Fair use.

Notwithstanding the provisions of Section 106, the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright. In determing whether the use made of a work in any particular case is a fair use the factors to be considered shall include--

(1) the purpose and character of the use, including whether such use if of a commercial nature or is for nonprofit educational purposes;

(2) the nature of the copyrighted work;

(3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and

(4) the effect of the use upon the potential market for or value of the copyrighted work.

Section 117. Scope of exclusive rights: Use in conjunction with computers and similar information systems.

Notwithstanding the provisions of Sections 106 through 118, this title does not afford to the owner of copyright in a work any greater or lesser rights with respect to the use of the work in conjunction with automatic systems capable of storing, processing, retrieving or transferring information, or in conjunction with any similar device, machine or process, than those afforded to works under the law, whether Title 17 or the Common Law or Statutes of a State, in effect on December 31, 1977, as held applicable and construed by a court in an action brought under this Title.

You can see therefore that there is some access to the copying of copyrighted material and under strict circumstances it may be done. Sections 107 through 118 spell out the limitations of the copyright. Anyone intending to copyright anything should investigate the Copyright Laws and follow the correct procedures.

Copies of the Copyright Laws can be obtained from the GOVERNMENT PRINTING OFFICE or one of its branches. In Portland we now have such a branch. It is located at 1305 S.W. 1st. Avenue. The phone number is 503/221-6217

Further information can be obtained by reading the book, AUTHOR LAW STATEGIES, by Brad Beren-1:::3, available in most public libraries.

"Why Should I?"

"What is the use?" and "Why should I?" are the two most fatal phrases in the English language. They mark the dividing line between success and failure for hundreds of thousands of people.

"What's the use?" is the philosophy of the chap who throws in the sponge when the battle has started. He sits down alongside the road when he finds that the signpost deceived him--instead of lengthening his stride. He is satisfied with "good enough." He has no goals, no visions. He accepts no challenge.

"Why should I?" is the cry of a workdodger. His aim is to do just enough to "get by." He is a clock watcher who is afraid he will render more service than he is paid to perform. He is too lazy to think, too selfish to help out in a common cause.

How much more vibrant and dynamic are the phrases, "It can be done!" and "You can count on me!" These phrases sparkle with the spirit of success and never fail to sufficiently reward."

—Reprinted from the Construction News.

I know that the wishbone will never replace the back bone?

Tingo

(EDITOR'S NOTE: Your editor originally found TINGO in another User's group newsletter. He typed it in, but could not get it to work. However thanks to John Usher, the errors were found and we now present a really neat game that we think you will enjoy. Thanks John.)

Tingo, like the name implies, is a bingo game for the TI. It will print game cards, call the game using the speech synthesizer and use all the proper "Bingo" rules.

You can specify the number of cards you would like to print out at the beginning of the game. Each one is printed randomly so no two should be alike. The cards take a while to print so you should same them for another game later on. You can bypass the card printout by specifying 0 when asked for the number of cards.

The visual display on the screen as the numbers are called is colorful and easy to follow. The numbers remain in view until the end of the game so that reference to the winners can be confirmed.

We believe that you will really enjoy this game. It has a number of interesting programming niceties and you programmers out there may enjoy following the logic. The time interval between the numbers called can be increased or decreased in line 410.

This program like all the others in this issue and previous issues are available from the librarian if you don't want to type them in.

```
100 L$=RPT$("-",80):: M$="!
"&RPT$("!     ",4)&"!
" :: M$=M$&M$
110 CALL MAGNIFY(2):: RANDOM
IZE :: DIM U(75,1),T&(7),U$(
15):: FOR I=0 TO 9 :: READ P
(I):: NEXT I
120 DATA 31599,18724,29671,3
767,16725,31183,31695,4775,
3172,31215
130 DISPLAY ERASE ALL AT(8,1
2):"Tingo" :: DISPLAY AT(10,
7):"By Steve Karasek"
140 INPUT "HOW MANY CARDS TO
PRINT ":N :: IF N THEN OPE
N #1:"PIO",OUTPUT,VARIABLE 2
55 :: PRINT #1:CHR$(27);"A";
CHR$(7);
150 FOR I=1 TO (N+1)/2 :: PR
INT #1 :: FOR J=1 TO 10 :: P
RINT #1:TAB(J*8-4);SEG$("TIN
GOTINGO",J,1);:: NEXT J :: P
RINT #1
160 FOR H=1 TO 5 :: PRINT #1
:L&=M$ :: FOR M=0 TO 1 :: FO
R J=0 TO 4
170 K=INT(U&(15)+1+J*15 ::
IF U(K,M)THEN 170
180 C(J,M)=K :: U(K,M)=1 ::
NEXT J :: NEXT M :: FOR K=0
TO 4 :: FOR M=0 TO 1 :: FOR
J=0 TO 4 :: N$=N$&"!" :: IF
H(>3 OR J(>2 THEN 210
190 IF K=2 THEN N$=N$&"FREE
!" ELSE N$=N$&"    "
200 GOTO 250
210 X=0 :: FOR W=1 TO 0 STEP
-1 :: X=INT(C(J,M)/10^W)-X*
10
220 FOR L=0-(J=0 AND W=1)TO
2 :: IF (P(X)AND 2^(L+K&3))
0 AND(W=0 OR X)0)THEN N$=N$&
"#" ELSE N$=N$&" "
230 NEXT L :: IF W THEN N$=N
$&" "
240 NEXT W
250 NEXT J :: N$=N$&"!" :: N
EXT M :: FOR M=1 TO LEN(N$):
: IF SEG$(N$,M,1)="#" THEN P
RINT #1;"#";ELSE PRINT #1:"
";
260 NEXT M :: PRINT #1:CHR$(
13);N$ :: N$="" :: NEXT K ::
PRINT #1:M$ :: NEXT H :: PR
INT #1:L$
270 IF INT(I/2)*2=1 THEN PRI
NT #1:CHR$(12);
280 GOSUB 470 :: NEXT I :: I
F N THEN CLOSE #1
290 FOR I=2 TO 7 :: READ T&(
I):: NEXT I :: FOR I=1 TO 15
:: READ U$(I):: NEXT I
300 DATA TWENTY,THIRTY,FORTY
,FIFTY,SIXTY,SEVENTY
310 DATA ONE,TWO,THREE,FOUR,
FIVE,SIX,SEVEN,EIGHT,NINE,TE
N,ELEVEN,TWELVE,THIRTEEN,FOU
RTEEN,FIFTEEN
320 CALL CLEAR :: FOR I=9 TO
14 :: READ J :: CALL COLOR(
I,J,J):: NEXT I
330 DATA 6,7,13,5,14,3
340 Z=0 :: CALL DELSPRITE(AL
L):: INPUT "PRESS (ENTER) WH
EN READY ":X$ :: DISPLAY ERA
SE ALL AT(1,5):"T I N
G O"
350 J=4 :: FOR I=96 TO 136 S
TEP 8 :: CALL VCHAR(I,J,I,17
):: J=J+5 :: NEXT J
360 IF Z=75 THEN 460
370 J=INT(RND*75):: IF U(J,0
)THEN 370
380 Z=Z+1 :: U(J,0)=1 :: I=I
NT(J/15):: J=J+1 :: DISPLAY
AT(J-1)*5+2,4*I+5)SIZE(2):US
ING "##":J :: X$=SEG$("TIN
GO",I+1,1)
390 CALL SPRITE(#4,ASC(X$),2
,144,104):: Y$=SEG$(J)&" ":
: FOR I=1 TO LEN(Y$):: CALL
SPRITE(#I,ASC(SEG$(Y$,I,1)),
2,144,114*I*14):: NEXT I
400 CALL SAY(U$):: IF J)15 A
ND J(20 THEN CALL SAY(U$(J-1
0),"TEEN")ELSE I=INT(J/10)*1
-(J)19):: CALL SAY(T&(I),,U$
(J-I(0))
410 FOR I=1 TO 150 :: CALL K
EY(0,X,S):: IF S THEN 430
420 NEXT I
430 IF B=0 THEN 340 ELSE DIS
PLAY AT(22,1):"PRESS C TO CO
NTINUE OR N FOR A NEW GAME"
440 CALL KEY(0,X,S):: IF X=-
1 THEN 440
450 X$=CHR$(X):: IF X$="C" T
HEN CALL HCHAR(22,1,32,64)::
GOTO 360 ELSE IF X$()"N" TH
EN 440
460 STOP 470 :: GOTO 340
470 FOR J=0 TO 75 :: U(J,0),
U(J,1)=0 :: NEXT J :: RETURN
```

Space Gems

(Space Gems was typed in and put in running order by Mike Cullinan and WordPlay would like to thank him for this effort.)

Space Gems is easy to type in and will provide your children with hours of fun and you too for that matter. It makes use of sprites, color and sound.

The game is pretty much self guiding from the menu and you can specify an easy game or a tougher one. When the menu is presented it will ask what velocity you want for your space ship. A low number is a pretty good idea here until you get the hang of the game. The skill level determines the speed of the enemy and how long the game runs. A low number here is also indicated until you have played a few times.

Have fun with our game of the month.

```
100 CALL CLEAR :: CALL SCREE
N(6):: MM=0
110 REM
120 REM ####################
PGM BY SAM MOORE JR
SHERMAN, TX 9/27/81
####################
130 REM
140 A$="(SPACE GEM)" :: FOR
GG=1 TO 7 :: DISPLAY AT(RND*
20,RND*20)BEEP:A$ :: NEXT GG
150 PRINT "DIRECTIONS? (Y/N)
"
160 CALL KEY(0,K,S)
170 IF S=0 THEN 160
180 IF K=78 THEN 270
190 IF K=89 THEN 200 ELSE 16
0
200 PRINT :"THE OBJECT IS
TO MANEUVER YOUR SPACE SHI
P TO AVOID BEING HIT BY T
HE OTHER    SPACESHIPS."
210 PRINT :"A RUNNING TOTAL
IS KEPT OF THE NUMBER OF TI
MES YOU ARE HIT. THE OBJ
ECT OF THE GAME IS TO MAK
E IT THROUGH"
220 PRINT "UNSCATHED. TO MAN
EUVER ENTERS OR D OR E OR X
(ARROWS)."
230 PRINT : "THE COMPUTER W
ILL ASK YOU WHAT VELOCITY
YOU WANT.":"(2) IS A GOOD ST
ART."
240 PRINT : "PRESS ANY KEY
TO CONTINUE..."
250 CALL KEY(0,K,S)
260 IF S=0 THEN 250
270 CALL CLEAR
280 PRINT "WHAT IS THE VELOC
ITY OF YOUR"
290 PRINT "SPACESHIP?(1-9)"
300 CALL KEY(0,K,S)
310 IF S=0 THEN 300
320 IF (K(49)+(K)57)THEN 300
330 CALL CLEAR
340 V=K-48
350 V=V+10
360 PRINT "SKILL LEVEL DETER
MINES HOW LONG THE GAME WIL
L LAST AND  SPEED OF THE ENEM
Y.":""
370 PRINT "WHAT SKILL LEVEL?
(1-9)"
380 CALL KEY(0,K,S)
390 IF S=0 THEN 380
400 IF (K(49)+(K)57)THEN 380
410 LVL=K-48
420 CALL CLEAR :: CALL SCREE
N(4)
430 REM SPACE GEM
440 REM DEFINE SPACESHIPS
450 A$="0000070F107F7F10"
460 B$="0000E0F008FEFE08"
470 C$="0F070E1120E0E0E0"
480 D$="F10E0E0604060F0F"
490 CALL CHAR(104,A$)
500 CALL CHAR(106,B$)
510 CALL CHAR(105,C$)
520 CALL CHAR(107,D$)
530 CALL MAGNIFY(4)
540 REM MAKE SPACESHIPS
550 CALL SPRITE(#1,104,9,125
,100)
560 FOR AA=10 TO 15
570 SPEED=RND*LVL/5*60+RND*2
0
580 CALL SPRITE(#AA,104,16,1
,AA*45-445,SPEED,0):: NEXT A
A
590 CALL SCREEN(2)
600 REM MOVE RED SHIP
610 CALL KEY(0,K,S)
620 IF K(>68 THEN 630 :: CAL
L MOTION(#1,0,V):: GOTO 680
630 IF K(>83 THEN 640 :: CAL
L MOTION(#1,0,-V):: GOTO 680
640 IF K(>57 THEN 650 :: CAL
L MOTION(#1,-V,0):: GOTO 680
650 IF K(>69 THEN 660 :: CAL
L MOTION(#1,V,0):: GOTO 680
660 CALL MOTION(#1,0,0)
670 REM CHECK FOR HIT
680 CALL COINC(ALL,CC)
690 IF CC THEN 750
700 KK=KK+1
710 IF KK)29 THEN 900
720 MM=MM+1
730 IF MM=60+LVL*40 THEN 790
740 GOTO 590
750 CALL SCREEN(9)
760 HIT=HIT+1
' 770 FOR ZZ=1 TO 4 :: CALL SO
UND(-400,-5,5,ZZ*11*110,9,ZZ
*12*110,9):: NEXT ZZ
780 GOTO 590
790 REM END OF GAME
800 CALL SCREEN(4):: PRINT "
END OF GAME": :"YOU SUFFERED
";HIT;"HITS"
810 PRINT : : : : : :
820 FOR O=1 TO 999 :: NEXT O
830 PRINT "WANT TO PLAY AGAI
N?(Y/N)"
840 CALL KEY(0,K,S)
850 IF S=0 THEN 840
860 IF K=78 THEN 890
870 IF K(>89 THEN 840
880 CALL DELSPRITE(ALL):: GO
TO 100
890 END
900 REM CHANGE ENEMY MOTION
910 KK=KK-28
920 FOR AA=10 TO 15 :: SPEED
=RND(LVL/9)*99*10
930 CALL SPRITE(#AA,104,16,1
,AA*45-445,SPEED,0)
940 NEXT AA :: GOTO 730
```

Digitron

This little guessing game will test your skill and logic. Run the program and you are given the chance to pick a number using three to six digits. You are then prompted to guess what the number is.

After each pick you are told how many of the numbers are correct and how many are in the correct order. By using these clues you can then make another choice using the logic of the previous answer. With a three digit number you should be able to figure out the answer in three or four tries. A larger number of digits requires more tries.

If you pick a six digit number, it could take considerable time to determine the answer. Type it in and have a good time with it.

```
100 REM ************
110 REM *          *
120 REM * DIGITRON *
130 REM *          *
140 REM ************
150 REM BY RICH KLEIN
160 REM CONCEIVED BY JIM KLE
IN
170 CALL CLEAR
180 CALL SCREEN(2)
190 PRINT TAB(7);"***DIGITRO
N***": :TAB(13);"by": : :T
AB(9);"Rich Klein": : : : :
: :
200 FOR F=1 TO 12
210 CALL COLOR(F,15,1)
220 NEXT F
230 FOR G=1 TO 500
240 CALL KEY(0,K,S)
250 IF S<>0 THEN 270
260 NEXT G

270 PLACE=0
280 DIG=0
290 SN$=""
300 X=1
310 CALL CLEAR
320 INPUT "NO. OF DIGITS? (3
-6):";A
330 IF (A<3)+(A>6)THEN 320
340 CALL CLEAR
350 RANDOMIZE
360 FOR D=1 TO A
370 SN$=STR$(INT(RND*10))
380 FOR E=1 TO D-1
390 IF SA$=SEG$(SN$,E,1)THEN
 370
400 NEXT E
410 SN$=SN$&SA$
420 NEXT D
430 INPUT "GUESS?: ";A$
440 IF LEN(A$)<>A THEN 430

450 PRINT : :"CORRECT:    PL
ACE   DIGIT": :
460 FOR I=1 TO A
470 GD=POS(SN$,SEG$(A$,I,I),
1)
480 IF GD=0 THEN 520
490 DIG=DIG+1
500 IF GD<>I THEN 520
510 PLACE=PLACE+1
520 NEXT I
530 I=I+1
540 PRINT TAB(15);PLACE;TAB(
24);DIG: :
550 IF PLACE=A THEN 590
560 PLACE=0
570 DIG=0
580 GOTO 430
590 FOR Z=1 TO 250
600 NEXT Z
610 CALL CLEAR

620 PRINT "You got it in";X;
"tries!"
630 IF X>A2/2 THEN 660
640 PRINT : :"EXCELLENT! (LU
CKY)": :
650 GOTO 700
660 IF X>A2 THEN 690
670 PRINT : :"GOOD!": : :
680 GOTO 700
690 PRINT : :"ROOM FOR IMPRO
VEMENT!": : :
700 FOR Z=1 TO 750
710 NEXT Z
720 INPUT "TRY AGAIN? (Y/N):
";Z$
730 IF Z$="Y" THEN 270
740 IF Z$<>"N" THEN 720
750 END
```

Print DIS/VAR 80

PRINT/DV80 by Barry Traver is a revision of Tom Freeman's READ/DV80. The new version allows you to choose your own options or defaults.

After you specify disk drive, the program asks you whether you want to stay with the original defaults as listed on the screen. If you decide yes, the program is off and running.

If you want to do something different, just say so, e.g., whether you want the printer to print out a disk catalog, or whether you want the printer to do "indented elite" (very useful for making printouts suitable for a three-hole notebook.)

If you indicate a "required string," the program will print out only those DV80 files that have that string in the filename. If you want all the DV80 files printed out, just press enter at the prompt.

You'll undoubtedly want to have perforation skip (if you're not using fanfold paper, this program is not for you!), but you can decide how much bottom/top margin to leave and whether you want the title of the file printed out at the top of the file or whether you want a form feed at the end of each file.

After you've printed out a disk, the new defaults that appear on the screen are the ones you previously chose, since you may very well want to use them again. Enjoy!

(EDITOR NOTE: If you like this program we suggest that you purchase the "Diskazine", a series of disks written by Barry Traver. They are available from PUNN.)

```
100 ! PRINT/DV80 - CATALOGS
A DISK ON FIRST PAGE OF PRIN
TOUT.
110 ! THEN PRINTS EVERY DIS/
VAR 80 FILE ON THE DISK AS I
S, WITH VARIOUS OPTIONS AVAI
LABLE, INCL. FILE TITLE AT S
TART AND FORM FEED AT END.
120 ! PROGRAM BY TOM FREEMAN
LA TIERS
130 ! MODIFIED BY BARRY TRAV
ER
140 OPTION BASE 1 :: CALL KE
Y(3,A,B):: A$="2" :: B$="N"
:: C$="4" :: D$="Y" :: C=4 :
: E$="Y" :: F$="Y" :: G$="PI
O" :: D=0 :: H$=""
150 DIM I$(127),E(127):: FOR
F=1 TO 5 :: READ J$(F):: NE
XT F
160 DISPLAY AT(1,1)ERASE ALL
:"PRINT/DV80--FOR PRINTING O
UT ALL DV80 FILES ON A DISK.
":"Program by Tom Freeman":"
Modi... by Barry Traver"
170 DISPLAY AT(6,1):"Disk Dr
ive #: ";A$: :"Defaults belo
w? (Y/N) Y": :"Print Catalo
g (Y/N)? ";D$: :"Indented E
lite (Y/N)? ";B$
180 DISPLAY AT(14,1):"Requir
ed String? ";C$:" lines": :"V
ant title header for each":"
file? (Y/N) ";E$
190 DISPLAY AT(21,1):"Want f
orm feed at end of":"each fi
le? (Y/N) ";F$: :"Printer:
";G$
200 ACCEPT AT(6,15)SIZE(-1)V
ALIDATE("1234"):A$ :: IF A$=
"" THEN 200
210 ACCEPT AT(8,24)SIZE(-1)V
ALIDATE("YN"):K$ :: IF K$=""
 THEN 210 ELSE IF K$="Y" THE
N 270
220 ACCEPT AT(10,23)SIZE(-1)
VALIDATE("YN"):D$ :: IF D$=
"" THEN 220
230 ACCEPT AT(12,24)SIZE(-1)
VALIDATE("YN"):B$ :: IF B$=
"" THEN 230
240 ACCEPT AT(14,19)SIZE(-10
):H$ :: IF H$="" THEN H$=""

250 ACCEPT AT(16,19)SIZE(-1)
VALIDATE("2345679"):C$ :: IF
C$="" THEN 250 ELSE C=VAL(C
$)
260 ACCEPT AT(19,15)SIZE(-1)
VALIDATE("YN"):E$ :: IF E$="
" THEN 260
270 ACCEPT AT(22,19)SIZE(-1)
VALIDATE("YN"):F$ :: IF F$="
" THEN 270
280 ACCEPT AT(24,11)SIZE(-18
):G$ :: IF G$="" THEN 280
290 IF D=0 THEN C$=" ":G$:
: D=1
300 PRINT #2:CHR$(27)&"N"&CH
R$(C):! SKIP OVER PERF
310 IF B$="Y" THEN PRINT #2:
CHR$(27)&"M"&CHR$(27)&"I"&CH
R$(10):ELSE PRINT #2:CHR$(27
)&"P"&CHR$(27)&"I"&CHR$(1):!
SET TO ELITE, LEFT MARGIN=10
OR PICA, LEFT MARGIN=1
320 DATA DIS/FIX,DIS/VAR,INT
/FIX,INT/VAR,PROGRAM
330 IF D$="Y" THEN DISPLAY A
T(12,3)ERASE ALL:"PRINTING D
ISK CATALOG..." ELSE DISPLAY

AT(12,3)ERASE ALL:"CHECKING
DISK CATALOG..."
340 OPEN #1:"DSK"&A$&".",INP
UT ,RELATIVE,INTERNAL :: INP
UT #1:L$,G,G,A :: IF D$="Y"
THEN PRINT #2:"DSK";A$;" - D
ISK NAME= ";L$:"AVAILABLE=";A
;"USED=";G-A:" FILENAME  SIZ
E  TYPE  P"
350 IF D$="Y" THEN PRINT #2:
"---------- ---- ----------
-"
360 FOR F=1 TO 127 :: INPUT
#1:I$(F),H,I,J :: IF ABS(H)=
2 AND J=80 THEN E(F)=1 ELSE
E(F)=0
370 IF D$="N" THEN 430
380 IF LEN(I$(F))=0 THEN 440
390 PRINT #2:I$(F);TAB(12);I
:TAB(17);J$(ABS(H));:: IF AB
S(H)=5 THEN 410
400 M$=" "&STR$(J):: PRINT
#2:SEG$(M$,LEN(M$)-2,3);
410 IF H>0 THEN PRINT #2 ::
:: PRINT #2:TAB(28);"Y"
430 NEXT F

440 CLOSE #1 :: IF D$="Y" TH
EN PRINT #2:CHR$(12)
450 FOR F=1 TO 127 :: IF I$(
F)="" THEN 510 ELSE IF E(F)=
0 THEN 500
460 IF H$<>"" THEN IF POS(I$
(F),H$,1)=0 THEN 500
470 N$="DSK"&A$&"."&I$(F):
DISPLAY AT(12,3)ERASE ALL:"P
RINTING ";N$ :: OPEN #1:N$,I
NPUT :: IF E$="Y" THEN PRINT
#2:CHR$(14);L$;".";I$(F)
480 IF EOF(1)THEN 490 ELSE L
INPUT #1:M$ :: PRINT #2:M$ :
: GOTO 480
490 IF F$="Y" THEN PRINT #2:
CHR$(12);:: CLOSE #1 ELSE CL
OSE #1
:: NEXT F :: IF F$="N" THEN
PRINT #2:CHR$(12);
510 DISPLAY AT(12,4)ERASE AL
L:"ANOTHER DISK? (Y/N) N":
: ACCEPT AT(12,25)VALIDATE("
YN")SIZE(-1):D$ :: IF D$="Y"
THEN 160 ELSE CLOSE #2 :: S
TOP
```

Professional Graphs

Have you ever wanted to make a professional-looking graph (like the one pictured) for some project, but were unable to find appropriate software to do the job? Graph-X and TI-Artist? I've never been satisfied with their limited work-space and inferior lettering. I've also had a hard time getting perfectly spaced horizontal lines on the bars using Graph-X. If only TI-Writer could do the job....

Well, it can!! In fact, this graph was done totally by TI-Writer. It takes just three steps and a little patience. Using the special 6x6 dot characters built into the Gemini (or compatible) printer, professional-looking graphs can be easily made.

As I said, making graphs is a three-step process: 1) creating the bars and axes, 2) writing the labels, and 3) printing 1) and 2) above. Making the bars and writing the labels must be done separately since the characters for each cannot be printed concurrently.

Step 1: Since the graphs will composed of the 6x6 dot matrix characters (ASCII 224 to 254), the line feed must be reduced so that the characters "touch" each other vertically. This command, written in the first line of the file is ESC A "F". (To make the description of formatting codes more clear, I've developed a new convention: characters that need to be typed while in special character mode will be surrounded by quotation marks. E.g., "A" means that the sequence CTRL U, SHIFT A, CTRL U must be keyed. ESC-ape, which is CTRL U, FCTN R, CTRL U, will continue to be called ESC. Note that although spaces are shown between these characters, none should actually be included.) This sequence will adjust the line feed to 6/72". When doing graphs, it is advisable to make the printer print unidirectionally. This is accomplished by ESC U "A". We next need to enter the printer to print the 6x6 dot characters needed to draw the lines. Type ESC >. You may type all of the former formatting codes in sequence without any spaces between. Type a carriage return after all. After that last formatting command, you are now in a new dimension of typing. For your convenience, a listing of the 6x6 dot characters is provided at the end of this article.

Spaces will now no longer be printed as spaces— you must first fill the entire screen with "'"'s (the backward apostrophe, or FCTN C). The easiest way to do this is to fill column 1 to column 80 with "'" and then to Copy this line until it is 60 or 70 lines long. The entire screen MUST be filled with those appostrophes. Now you can start composing your graphs. First, place the axes in the appropriate place, taking into account where the labels will go. The Y-axis will be composed of "u"'s, with a "v" as the origin corner, and "q"'s composing the X-axis: If your Y-axis will run down (e.g.) column 35, go into command mode, type RS (Replace String), and type "35 35 /'/U/". The two 35's will make the computer Search for all "'"'s in column 35 only and replace them with "u"'s as many times as you want (see p. 87 of you TI-Writer manual for this gem of an option. This eliminates the need to type a "u", cursor down one and back one, type "u", cursor down one and back one, and so on ad infinitus; it can be done extremely quickly.
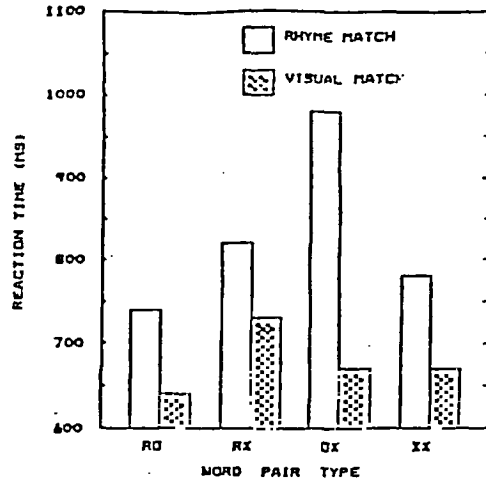
For this, and all other RS sugestions in this article, it is absolutely necessary that you are out of word wrap mode. To exit word wrap, type CTRL O. The cursor will trun into an empty flashing rectangle.

Now that you have your axis, you can start with the graphs. It is wise to make a fairly precise graph by hand first to facilitate screen construction. The height and width of the bars is up to you, of course, but in the example, the width of each bar is four characters, including the lines. When considering how high your graph should be, it is important to keep in mind that it will be "shrunk" somewhat when printed. Therefore, you may want to make the graph "higher" than perhaps seems reasonable on the basis of what appears on the screen. The sample graph above was about 55 lines long. Experiment with various combinations of the special characters, and then print them out using the Editor's PF command. Unless you have a RAM disk, why go to the Formatter when Print File will do the same thing more quickly? Now save the file to disk (e.g. DSK1.BARS).

Step 2: First, delete the formatting codes that enabled the printing of the special characters (ESC >). Next, go to RS in command mode, and get rid of all the "'"'s (type "/'//" and hit the "All key when prompted — it will take a while). The screen will now look a bit more normal. Type in all of your labels and numbers in the appropriate places next to the axes that are still on the screen in the form of "u"'s and "q"'s. It is very important that you do not delete any lines to make your labels. The reasons for this will become clear later. Also, if you are writing anything that will be printed on consecutive lines, leave a blank line between them; otherwise the letters will be touching each other when printed. Labels for the Y-axis can be printed last by turning the page sideways in the printer. You can, however, print this label vertically if you leave a blank line between each letter.

After all of the labelling has been done, be sure to delete every remaining trace of the original graph (the "u"'s, etc.), leaving only your labels and numbers. Now save this file (e.g. DSK1.LABELS). While these instructions specify that you draw the graphs first and the labels second, it makes perfectly good sense to do it the other way around. All that is important is that they

Desk Top Publishing - Part I

(This article will be one of several to follow in the coming months. The theme, "Desk Top Publishing". My congratulations to the fine PUNN User's Group.—Jim Luque.)

Because of our limited RAM capability a complete sophisticated Dest Top Publishing package seems unlikely; however we can come close to duplicating much of the same output as an IBM or MACINTOSH. Granted, we may not do everything they can do, and we may have to "jump" through a few more hoops to reach our goal, but we CAN accomplish much the same; and at a much lower cost!

My ultimate goal is to demonstrate how such products like TI-ARTIST, FONT-WRITER, GRAPHX, PICTURE-IT and others can be used separately or in union with one another to produce an attractive finished product.

For the first of my series, I will explain how I put together the BOOK REPORT form (see sample in reduced size-it really fills an 8 1/2 X 11 inch page). I use this form for my school class. A colleague of mine owns a MACINTOSH. He created an attractive book report form that impressed me. I quickly said to myself, "How can I do the same?" After some thought, I began duplicating (no, improving) his form. Our forms were indentical in text, layout, and graphics, with the exception of the row of book ends at the top and bottom, and the horse graphic.

Here's how I started: The TMS (Toledo Middle School) books and book ends are actually TI-ARTIST fonts. The name of the font is BOOK_F. It is on the TRIO+SOFTWARE Data 3 disk of fonts and graphics. I booted the font into TI-ARTIST, typed the special character for the front book end, then "TMS", and finally, the end book end. I saved the TMS message as an Instance.

For the "reading horse" graphic, I had to first convert it from an RLE picture to an Instance. To do this, I used the Artist Enhancement option. After saving my newly created Instance, I decided it was too large for m. purpose, so I used ASGARD'S ARTIST ENLARGER (which also has a reduction feature) to reduce the Instance. I now had two saved "horse" Instances; the original and the reduced one.

I loaded my second horse Instance into TI-ARTIST, entered my font, and typed my title. I then saved this as a picture file. The two boxed in graphics were created and saved as ARTIST Instances. The fonts came from GENIAL FONT PACT #1 and #2. The fonts in this package are well suited for work like this, because of their size.

The borders came from ARTIST BORDERS #1

by ASGARD.

Now, here is how I put this all together. I created my TI-WRITER text file using the FONT-WIRTE? recognized dot commands. After saving this file, I ran it through the FONT-WRITER formatter. If you havn't used FONT-WRITER much, make sure all your files (text and graphics) are on the same disk. FONT-WRITER will now print everything for you. I know all this may sound like a round-about way of doing things, but it's not really that bad. The hardest part is knowing exactly what you want to do first!

As you study the actual TI-WRITER file, you can see that the heart of the entire form was the creation of one Artist picture and 5 Instance files. The last Instance file was a saved Instance of my name in script.

In the next article in this series I will show you how to use PICTURE IT, TI-ARTIST and TI-WRITER to produce a very professional looking document. Until then, HAPPY TI-ING!

—Jim Luque

(continued from page 6)
be done separately, that the correct format codes are in place, and that no lines are deleted in either file.

Step 3: Make a marking on the perforation strip (if you are using form—feed paper) right above the holder on the tractor unit (or make some other kind of reference marking). You will need to know exactly where you started printing. Next, print you label file (using PF). After this file has been printed, roll the paper backwards until the reference marking is in the same place. If you printed your graph first, be sure to turn your printer off before printing your labels. This initialized the printer to prevent it from continuing to print the special charac-

ters. You can also stop the special characters from printing using the format code ESC #. Now, LF (Load File) your bargraph, and print it out. Viola, you now have your professional looking bargraph. To make it darker, include the formatting codes ESC E and ESC G (for emphasized and doublestrike) along with the other format codes at the top of each file.

The 6x6 dot matrix special characters are:

Letters:	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
Alter ESC >:															
Letters:	p	q	r	s	t	u	v	w	x	y	z	(	)		
Alter ESC >:															

(WordPlay wishes to thank Cal Oberg for typing in this article.)

WORDPLAY
The PUNN Newsletter
P. O. Box 15037
Portland, Oregon 97215
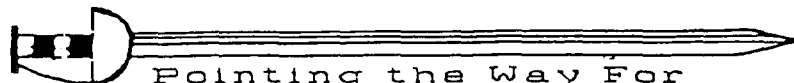
F: ____ meetings are held
____ ____ of each

**Change in Meeting Place
and Date this month.**

**See
Special Insert**

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