

DVUG MONTHLY NOTICES, MINUTES

DVUG EXECUTIVE COMMITTEE MEMBERS IN 1985

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| | |
|-------------------|-----------------------|
| Delaware TIBBS | South Jersey TI BBS |
| (302) 322-3999 | (609) 435-7301 |
| Between 6-9 p.m., | you may also contact: |
| TOM KLEIN | Pa. (215) 494-1372 |
| JACK SHATTUCK | Del. (302) 764-8619 |
| CAROL ROSOWSKI | N.J. (609) 228-2445 |

A Delaware Valley Users Group membership includes monthly newsletter, library and software privileges, plus other special benefits. Annual membership rates are: Family or Individual \$15; Students \$5; Newsletter only (beyond 75 miles) - \$10

PLEASE TRANSMIT YOUR NEWSLETTER COPY TO:
 The Data Bus Editor -- Jack E. Shattuck,
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ON OCTOBER 24TH, all those interested in running newsletters and other printer files, TI-Writer tips, etc., prepare to meet in a Printer SIG, following DVUG's main program that evening at Christiana.

Participants are encouraged to bring a favorite program, and listing as well, for others to share and understand. Any-one willing to bring a Gemini printer to demonstrate, call Jack Shattuck.

DVUG's Jersey chapter has now assumed official sponsorship of the TI BBS which Mike Baker is doing such a nice job of managing as SYSOP. You can reach the BBS at (609) 435-7301.

October's Deptford meeting continues reviewing new graphic programs, as begun in September. Dave Rose's CHARACTER SETS & GRAPHIC DESIGNS will be demonstrated.

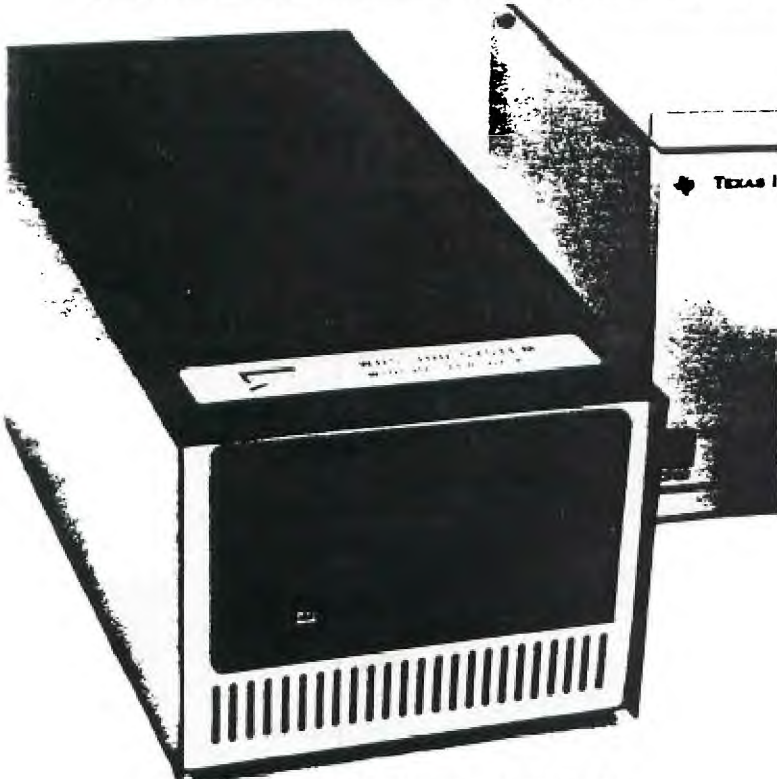
Sept. 26th's meeting brought out the diehards, despite ominous weather which closed Christiana Mall the next day. At that meeting, Dan Lounsberry presented Don Heritage his first prize in August's drawing, CorComp's 9900 Micro Expansion System.

Availability of several items noted in the September Data Bus were indicated by the Editor. Members were encouraged to complete their equipment surveys, as so far about one-half have done to date. Those not yet responding should obtain forms at October sessions so we may complete the information-gathering within a three-month period to keep data current. That should conclude the survey for 1985 except for new members joining.

Members suspended normal business procedures to hear several guests. James Hollender of J&KH Software had come from Alexandria, Virginia to Delaware to hear the following speaker. In exchange for the courtesy of the meeting at which SXB and some other products were described, a special offer was made for DVUG purchasers that evening. A future visit to further elaborate on Super Extended Basic was projected.

Norm Freedman's presentation of Myarc activities then followed, and the speaker anticipated future participation with our members. Due to time allocated for this subject, the anticipated TI-Writer/Newsletter SIG did not start in September, but will attempt to in October.

PLEASE NOTE OUR OCTOBER MEETING IS ON THE 4TH - NOT THE LAST - THURSDAY OF THE MONTH. That means that New Jersey and Delaware sessions will be the same week, due to the calendar. REMEMBER, NOVEMBER WE'LL SHIFT THE CHRISTIANA MEETING DATE, due to Thanksgiving.



GULP, WHAT A BYTE!

Pressing priorities of personal needs have required that the former DVUG SYSOP (SYSTEM OPERATOR) for our Bulletin Board System (TIBBS) in Delaware reluctantly had to yield that assignment.

DVUG's V.P. Tom August and TIBBS Committee members Barry Boland, Jim Davis, Tim Evers, John L. Kelley, Don Newsom and Paul Wells have continued active efforts at improving TIBBS operations. It continues in operation, using (302) 322-3999, under Committee supervision. Their rapid response permitted us to stay on line, retaining the number we have used for the past 18 months, although now re-located. WHEN CALLING FOR VOCAL ASSISTANCE, USE PHONE NUMBERS ON PAGE 2 OF THE DATA BUS, INSTEAD OF THE OLD "HELPLINE".

The need to provide broader-based and more rapid services, including access to our software library file, has suggested one technical option which may offer a solution to several concerns at once.

The committee will present proposals to DVUG's membership for consideration, including possibly buying a Winchester 10-megabyte disk system. In the memory capacity and structure of this piece of

equipment is capability for files placed into a series of directories, with up to 127 files to be called. This would permit member access in some areas, such as software, while offering casual callers another series of options. A significant increase in speed plus storage capacity would be obvious immediately. Other considerations such as XMODEM transfer capability can be implemented soon, without some of the cost concerns, onto TIBBS.

MYARC Winchester Disk Systems are now available at significant savings. When originally introduced 3 years ago, list cost was \$2500 for 5 MB's, \$3000 for 10. DVUG this month received mail from JOHN J. MESHNA, JR., INC., 19 Allerton St., Lynn, MA 01904, (617) 595-2275, offering a 5 MB system for \$1200, \$1400 for 10 MB, NEW, yet our TIBBS Committee has its eyes on even better savings.

Please offer them your considerations when their report is presented at upcoming Deptford and Christiana meetings. It would provide a major innovation for any TI User Group to take such a step. There also are concerns about priorities relative to the large number of South Jersey members, for whom access requires a long distance call. Our Jersey TIBBS, (609) 435-7301, can run 1200 baud speed; Delaware only 300. YOUR priorities, please.

 DVUG TREASURER REPORT FOR SEPTEMBER, 1985

This statement was omitted during the September meeting, when normal procedure was suspended for the special program.

| | | |
|--------------------------|--------|----------|
| PRIOR BALANCE | | 913.09 |
| 8 new members | 120.00 | |
| 1 renewal | 15.00 | |
| 50/50 drawing | 20.00 | |
| CorComp drawing | 190.00 | |
| INCOME FOR MONTH: | | + 345.00 |
| | | ----- |
| | | 1258.09 |
| Aug./Sept. Phone (TIBBS) | 17.08 | |
| Newsletter | 75.85 | |
| Postage Costs | 45.67 | |
| Refreshments | 9.94 | |
| EXPENSES FOR MONTH: | | - 148.54 |
| | | ===== |
| CURRENT BALANCE | | 1109.55 |

CAVEAT EMPTOR: N. A. G.

Guy-Stefan Romano of the AMNION HELPLINE (page 6), who has been giving personal assistance to TI-99/4A users since 1981, advised us that he's received over 150 calls from around the country which he described as complaints about the National Assistance Group, referenced on page 6 of this DATA BUS issue.

Romano notes that their product items which you may purchase after procuring a "membership" have included public domain software under other names, such as the Apesoft demo disk NAG lists as "Super Colossal Graphics" and, according to Romano, our own Steve Lawless' MassCopy as a sale item called "Super Disk". (Prices for commercial products are generally above the major catalog sources, too, he says; where's the membership benefit?)

Romano makes other allegations, which generally amount to questioning the bona fides of the NAG.

The DATA BUS contacted Ed York, President of the Cin-Day User Group, who has run the notices about NAG's CPM card in their UG newsletter which were the basis for our comments (on p.6, and in July at p.9). He states that he was given that data by NAG's Dr. Richard Kurtz, over the phone. York has no written specs.

The NAG had sent Cin-Day two membership applications. In the three months since they were mailed back with the \$10 checks, only one newsletter has been received, and no other follow-up. While other publications, to be unnamed, have matched such slowness of response, mailing ~ or lack of it ~ regarding product orders with that delay may cause certain legitimate concern.

The DATA BUS has had no contact with the NAG, and the Delaware Valley Users Group has formed no opinion about it.

As with all groups with whom individuals are personally unfamiliar, contacts with local Users Groups may give you the information you need to evaluate such an operation. All product information that appears in this newsletter is provided for information purposes only. The Delaware Valley Users Group does not make commercial endorsements. Unsigned articles are written by the DATA BUS Editor.

MYARC PRODUCTS ... (Cont'd. from Page One)

Any amount of the extra memory above the initial 32K can be allocated to the printer buffer, or "spooler", while the rest is available as additional program workspace. One use shown formatted the RAM Disk into an emulated DSK1., rapidly running TI-Writer and Multiplan files that had previously been loaded into the RAM Disk memory, and simultaneously letting one dozen pages print from the buffer left from another program.

Speedier operating execution was attributed to the solid state elements in the memory expansion card, as well as to the added memory. Freedman used the new 512K card for a demo, but noted that the principle was the same for a 128K card.

With suggestions from a few DVUG members who'd recently obtained Myarc's new Disk Controller Card, Freedman then used several routines from the disk-based "Disk Manager III". Included were CALL DIRectory functions loaded from TI Basic without affecting programs in RAM, and a few assembly language functions, such as CALL LR (like "Call Load"), and CALL LLR (like "Call Link").

These presentations came after an engrossing account of Myarc's involvement with 99/4A products over the past three years. The New Jersey-based firm developed its interfacing Personality Card to run Winchester hard disks in 1983, for TI's international business market and small cost-conscious U.S. concerns. The Mini-Peripheral Expansion System was released in 1984 to meet upgrade needs, as TI's P-Box supply appeared exhausted.

Accordingly, Myarc's products were designed for compatibility with the MPES when an unexpected source of additional TI P-Boxes was found. Myarc then issued its components in separate card format, even redesigning the disk controller to read non-standard (i.e., CorComp) format which had developed popularity in the TI marketplace. Additional P-Box availability, and earlier 99/4A users seeking new capabilities, led to the current trends.

C.R. Distributing, (404) 928-8791, provides local retail outlets, or order directly from Triton, (800) 227-6900, if you wish a quick source of Myarc products.



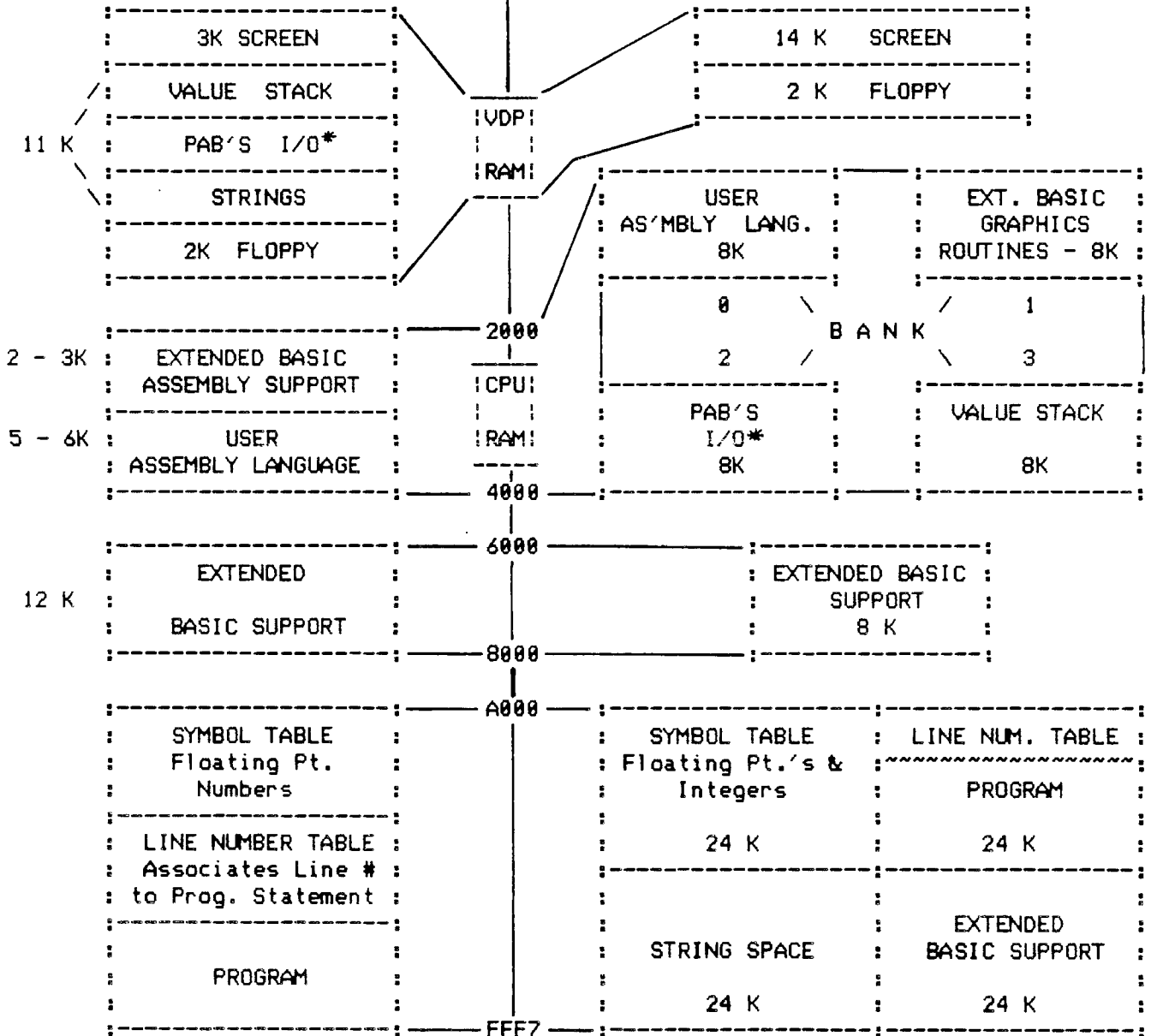
EXTENDED BASIC

Standard 9918A supports:
 Graphics Mode (32x24 + Sprites)
 Text Mode (28x24, No Sprites)



EXTENDED BASIC II 128 K. OS

Standard 9918A supports:
 Graphics Mode (32x24 + Sprites)
 Text Mode (40x24, No Sprites)
 Bit Mapped Mode (192x256 + Sprites)



24 K - 4 GROMS

*Peripheral Access Blocks

USABLE RAM = 37 K

3-10X Increased Speed

USABLE RAM = 88 K

MICROpendium . . .

(Cont'd. from Page 1)

The DVUG receives approximately three dozen other Users Groups' Newsletters to be culled through in batches during the month. Your DATA BUS tries eclectically to print items of suspected wide interest. Members' expression of appreciation are most gratifying, but our base of information is often limited.

MICROpendium has done the impossible, replacing the function which 99er Magazine, HCM's predecessor, performed back in 1982-83, giving current product news and analysis, advertisements, excellent utility offerings, reader comments and programs each month. Most significantly, it has become recognized as the TI community's focal point, as it has consistently stuck with news of the 99/4A only. It lists Freeware every alternate month.

Most incredibly, this is done by two people, for the most part, drawing data from Users Groups, individuals, merchants and others across the country. A more useful tool would be hard to find; look over an issue at your next DVUG meeting.

ANNIVERSARY TIME

October, 1983: Texas Instruments made the announcement that no more TI-99/4A's would be produced by the company after a total estimated at 2.5 million had been issued. Several other family computers, and one other known only by its initials and commonly called the "Peanut" - with sales of only 500,000 - have bitten the dust since then.

Yet the 99/4A lives, strengthened by a corp of supporters which include many Users Groups throughout the country, and abroad. After April 24, 1984, TI ceased to be a source of software, but that has not deterred others, with mixed blessing as the internal architecture has become more known and utilized to the capacity TI never reached, improved by others.

Your Delaware Valley Users Group has over 100 paid-up family memberships with over 200 users in our group. Area school TI users amount to many more. Consider a holiday gift DVUG year's membership - we'll create a colorful announcement.

RECENT PRODUCT NEWS

Dr. Guy-Stefan Romano, Amnion's one-man Helpline, has over 4,000(!) Free Access, or public domain, programs. These may be freely circulated if no charge is made. They include every category, plus a group of Forth programs, also.

The latest catalog details should be in the hands of DVUG by the time you see this Data Bus issue. User-created software is solicited with a note specifying placement into public domain. There are over 100 disks or "volumes" in this collection, which usually cost \$5 SS/SD, or \$8 on DS/DD disks - or half that, if you send disk, mailer, and postage.

If you want your own order forms, the address is: 116 Carl Street, San Francisco, CA 94117. Amnion sponsors Dr. R's Helpline technical phone assistance, in operation between 9 a.m.-4 p.m. (Pacific time - 3 hrs. from us), Monday through Saturday, (415)753-5581, for all kinds of help regarding your TI.

ASGARD SOFTWARE, P.O. Box 10306, Rockville, MD 20850 has several items worthy of note including the new GRAPHX COMPANION, 2 new disks to complement the Australian GRAPHX drawing program, @ \$7.00.

They have had a series of "The Best Public Domain ..." disks available for a while, including Music I, II, and III at \$6.95 (\$7.95 for III). Music I consists of two disks with over 20 programs; M II classic and operatic music; M III mostly from overseas. TBPD Games I collection includes 20 XB games, \$6.95; Games II is an assembly language 6-game set, \$5.95.

DISK DATA BASE sorts, prints, catalogs etc. over 10,000 programs with Assembly Language routines, converts Master Disk files. 32K, XB, on 3 disks; \$15.

Write for a full catalog/description.

Here's a new upgrade contender:

A CP/M CARD, to run current 2-88 2.2 software on your TI, has been released by THE 99/4A NATIONAL ASSISTANCE GROUP, P.O. Box 290812, Ft. Lauderdale, FL 33329 for \$339.95. It does require a pig-tail cable, for \$18.00. The NAG has a 24-hr. info line, (305)583-0467. For \$10, they have yearly membership benefits, too.

MORE PRODUCT NEWS 0 0 0

CORCOMP has introduced several items, available as stand-alones, or for inclusions in TI's P-Box. Their TRIPLE TECH CARD for the P-Box includes a real time CLOCK/CALENDAR (Yr.,Date,Hr.,Min.,Sec.), 64K PRINTER BUFFER, and a port for TI's Speech Synthesizer board (so that can be removed from alongside). The (parallel only) printer buffer has unique "copy" features, and the Clock/Calendar can be accessed from TI Basic.

The Clock/Calendar, when bought as a separate unit, contains a Load Interrupt switch useful for programs such as Danny Michaels' or Quality 99 screen dumps, or Tarik Isani's Microkey. Since the space in the P-Box precludes that feature from inclusion on the Triple Tech card, Cor-Comp is developing a separate switch.

Triple Tech has been running in catalog house ads for \$129.95; Clock/Calendar for \$79.95.

DATAx, 1923 Linden St., Ridgewood, NY 11385 (718)417-0165, answered our query (July DATA BUS, p.4) with updated data.

TI 1-2-3 Version 2.00, is an XB combo spreadsheet, word processor and a typewriter (dump) program, for \$34.95. Runs with tape or disk, 16 or 32K, comes with hard-cover binder documentation. Add \$3 first class s/h charges; comes with 15-day money-back guarantee.

PERSONAL ASSISTANT includes the above as well as a database program (capacity not specified), \$54.95 & \$3 s/h costs.

These three programs come separately:
PERSONAL FILER (database) \$24.95;
PERSONAL PLANNER (spreadsheet) \$19.95;
PERSONAL WRITER (word processor) \$19.95.
(\$3 and 15-day terms as in the package.)

DA-TAX AUDITOR is a Basic (tape/disk) income tax figurer with spreadsheet and printout options. \$9.95 plus \$1 s/h.

SPECIFY SYSTEM NEEDS WHEN ORDERING.

Plus ...

BASIC, FORTH and PASCAL VIDEO TUTORIALS are also available from DATAx, VHS format, for beginners. Rental is \$14.95 monthly (plus \$15 refundable deposit) or \$29.95 purchase for each VCR item.

Include \$3 first class s/h charges.

GRADEBOOK time is here with the start of a new school year. As Personal Record Keeping won't do the job in a fancy format, teachers can try GRADEBOOK by WREN SOFTWARE, P.O. Box 1138, Castle Rock, CO 80104. \$37.50, tape or disk version with printout options. Disk version requires 32K and XB. Uses menu and prompts for a class of 50 students; ranking, weighted scores, averaging, grade calculation.

Also sold for IBM PC & Apples II.

VISA,MC taken. SPECIFY SYSTEM NEEDS.

MILLER GRAPHICS has demonstrated the GRAM Kracker, soon available under \$200. It allows LOADING and ALTERING cartridge content via disk OR tape, will load several cartridges at once if you expand to 80K from the provided 48K, and other unbelievable things. WATCH YOUR DATA BUS!

MYARC's 32/128K RAM Disk PLUS the new 128K.OS Extended Basic II Cartridge (see page 5) are available together, for what is the suggested RAM Disk price alone, from TRITON Products Co., P.O. Box 8123, San Francisco, CA 94128, (800)227-6900.

Place your order for item #YXBA, at \$249.95, and join the line. The package will be shipped as a pair, after Triton receives them from Myarc. All TI owners who sent back their warranties should be on the Triton mail list.

PILOT 99 Programming Language without a P-Code card can be ordered from author THOMAS P. WEITHOFER, of Ohio's Cin-Day User Group, as Freeware (\$10). Write to 1000 Harbury Drive, Cincinnati, OH 45220. Send two disks and postage; with a third disk if you want source coding.

TI-SORT provides single or bi-level sorts on user-defined field, for D/V 80 files created with TI-WRITER or E/A. 300 record and printout capacity. Loads from TI/TK-WRITER Option 3, or E/A Option 5. Demo file, documentation included. \$6 to DAVID R. ROMER, 213 Earl St., Walbridge, OH 43465.

A new lucid disk-based reference and step-by-step tutorial to TI-WRITER has been authored by, and is available from, LARRY ROBINSON, 503 Third Avenue, Bon-Aire, GA 31005, for \$15, not copyrighted.

TIPS FROM THE TIGERCUB

Excerpted from

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TIGERCUB SOFTWARE

156 Collingwood Ave.
Columbus, OH 43213

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So, on to new business -

ANNOUNCING

The TI-99/4A TRAVELER
a magazine-on-disk!

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and programs in each issue
(SS/SD or DS/DD)!

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phone (215) 483-1379

To give you an idea of
Barry Traver's knowledge of
our computer, try this one.
I've figured out the why,
but I'll have to ask Barry
to explain the why of the
why!

```
100 ! LINPUT PUZZLE/BUG by
    B.A. Traver
110 ! QUESTIONS? Send SASE
    to Barry Traver
120 ! 552 Seville St.
    Phila. PA 19128
130 CALL CLEAR :: PRINT "LIN
    PUT PUZZLE/BUG":BY BARRY TR
    AVER"
140 PRINT "Can you figure ou
    t why your computer will not
    obey?"
150 PRINT "Why won't it stop
```

```
when you tell it to?": : :
160 LINPUT "Want me to stop?
    (YES/NO)":W$
170 IF W$="YES" THEN STOP EL
    SE 160
180 END
```

It seems that many of
you still haven't heard of
Super 99 Monthly, published
monthly (and on time!) by
Bytemaster Computer
Services, 171 Mustang
Street, Sulphur, LA 70663,
for \$12 per year. The May
issue contained a Word
Processor Dump, to dump a
graphics/text screen into a
D/V80 file which can be
printed out of the TI-Writer
Formatter - that program
alone is worth the annual
subscription price!

I've said it before,
there is more than one way
to skin that poor cat. This
is my routine to alternate
between the #1 and #2
joysticks.

```
Z=Z+1+(Z=2)*2 :: CALL (JOYST
    (Z,X,Y)
Compact, isn't it? Now, the  
Reading-Berks 99ers publish  
a newsletter called "A Byte  
of Info", which is hardly  
more than a byte long, but  
the August byte was a  
mouthful! Check this -
```

```
100 Z=2
110 Z=1/Z*2 :: CALL JOYST(Z,
    X,Y)
And this! Elegant!
Z=Z# :: CALL JOYST(Z+2,X,Y)
```

Here is another of
those programs that write a
program. This one will read
a screen of graphics and/or
text and convert it into a
RUNable program of DISPLAY
AT statements which will
recreate the screen.

First, we need a file
of the hex codes of all the
normal characters, to check
against to see if any have
been redefined. Rather than
key in all 95 of the
16-digit codes, let's write

a program to write a program
of them -

```
110 OPEN #1:"DSK1.HEXCODES",
    VARIABLE 163 :: LN=30000 ::
    FOR D=32 TO 124 STEP 8 :: FO
    R CH=D TO D+7 :: CALL CHARPA
    T(CH,CH$)
120 D$=D$&CHR$(179)&CHR$(200
    )&CHR$(16)&CH$ :: NEXT CH
130 PRINT #1:CHR$(INT(LN/256
    ))&CHR$(LN-256*INT(LN/256))&
    CHR$(147)&SE$$(D$,2,LEN(D$))
    &CHR$(#): LN=LN+1 :: D$=""
    :: NEXT D
140 PRINT #1:CHR$(255)&CHR$(
    255):: CLOSE #1 :: END
```

RUN that to create a
MERGE format program of DATA
statements. Now, key in the
GRAFWRITER program -

```
31000 SUB GRAFWRITER
31001 OPEN #1:"DSK1.P6",OUTP
    UT,DISPLAY ,VARIABLE 163
31002 RESTORE 30000 :: L=300
    00 :: GOSUB 31018
31003 FOR CH=32 TO 127 :: CA
    LL CHARPAT(CH,CH$):: READ A$
    :: IF CH$=A$ THEN 31004 ELS
    E GOSUB 31019 :: GOSUB 31018
31004 NEXT CH
31005 FOR CH=128 TO 143 :: C
    ALL CHARPAT(CH,CH$):: IF CH$
    =RPT$(" ",16)THEN 31006 ELSE
    GOSUB 31019 :: GOSUB 31018
31006 NEXT CH
31007 PRINT #1:L$&CHR$(157)&
    CHR$(200)&CHR$(5)&"CLEAR"&CH
    R$(#): GOSUB 31018
31008 FOR R=1 TO 24
31009 M$=L$&CHR$(162)&CHR$(2
    40)&CHR$(183)&CHR$(200)&CHR$(
    (LEN(STR$(R)))&STR$(R)&CHR$(
    179)
31010 FOR C=3 TO 30 :: CALL
    GCHAR(R,C,6):: CALL HCHAR(R,
    C,42):: IF F=# AND G=32 THEN
    31013
31011 F=1 :: IF FF=1 THEN 31
    012 ELSE CC=C-2 :: FF=1
31012 A$=A$&CHR$(6)
31013 NEXT C :: IF CC=# THEN
    CC=1 :: A$=""
31014 PRINT #1:M$&CHR$(200)&
    CHR$(LEN(STR$(CC)))&STR$(CC)
    &CHR$(182)&CHR$(181)&CHR$(19
    9)&CHR$(LEN(A$))&A$&CHR$(#)
31015 L=L+10 :: F,FF,CC=# ::
    M$,A$="" :: GOSUB 31018 ::
    NEXT R
31016 PRINT #1:L$&CHR$(134)&
```

```
CHR$(201)&L$&CHR$(#): GOSUB
    31018
31017 PRINT #1:CHR$(255)&CHR
    $(255):: CLOSE #1 :: SUBEXIT
31018 L1=INT(L/256):: L2=L-2
    56#L1 :: L$=CHR$(L1)&CHR$(L2
    ): L=L+10 :: RETURN
31019 PRINT #1:L$&CHR$(157)&
    CHR$(200)&CHR$(4)&"CHAR"&CHR
    $(183)&CHR$(200)&CHR$(LEN(ST
    R$(CH)))&STR$(CH)&CHR$(179)&
    CHR$(199)&CHR$(16)&CH$&CHR$(
    182)&CHR$(#): RETURN
31020 SUBEND
```

Next, Enter MERGE DSK1.
HEXCODES to merge in those
DATA statements. Then save
the program by SAVE
DSK1.GRAFWRITER,MERGE

Now, load any program
which has a screen you would
like to copy. Run the
program to the point where
the screen display is ready,
then break it with FCTN 4.
Put in a temporary line
going to itself, such as
1001 GOTO 1001, and run the
program again to be sure you
found the right place. Then
replace that temporary line
with CALL GRAFWRITER :: STOP
Put in the disk
containing the Grafwriter
program and enter MERGE
DSK1.GRAFWRITER. Then RUN
the program. When it stops,
type NEW, then MERGE DSK1.P6
and then RUN!

Now for a Tigercub chall-
enge that I can't answer!
Can one of you assembly
programmers tell me how to
PEEK out of Extended Basic
for screen color and charac-
ter set colors, so I can
reproduce them in that
program?

And, thanks to Jerry Glaze
in the Southern Nevada UG
newsletter, by way of the
Tidewater newsletter - you
don't need SIZE with DISPLAY
AT - just a semicolon!
100 DISPLAY AT(12,1):RPT\$("*
",28):: DISPLAY AT(12,1):"SE
E?";

MEMORY FULL! - Jim Peterson

DELAWARE VALLEY USERS GROUP: OCT. 1985

These handy TI-WRITER commands appeared in Portland, Oregon's PUNN Newsletter, originally submitted by Bob Stephens from the TI Users Group of Will County, Romeoville, Ill. This puts the most-used commands on one page for handy access with your computer. Dual FCTN/CTRL key choices are for typing ease.

| EDITOR COMMAND | FCTN | CTRL | EDITOR COMMAND | FCTN | CTRL | EDITOR COMMAND | FCTN | CTRL |
|------------------|------|------|------------------|------|------|-----------------|------|------|
| Back tab | | T | Ins. blank line | 8 | 0 | Quit | = | |
| Beginning/line | | V | Insert character | 2 | G | Reformat | | 2orR |
| Command/escape | 9 | C | Last paragraph | | 6orH | Right arrow | D | D |
| Delete character | 1 | F | Left arrow | S | S | Roll down | 4 | A |
| Del. end of line | | K | Left margin rel. | | Y | Roll up | 6 | B |
| Delete line | 3 | N | New page | | 9orP | Screen color | | 3 |
| Line #'s(on/off) | 0 | | New paragraph | | 8orM | Tab | 7 | I |
| Down arrow | X | A | Next paragraph | | 4orJ | Up arrow | E | E |
| Duplicate line | | 5 | Next window | 5 | | Word tab | | 7orW |
| Home Cursor | | L | Ops! | | 1orZ | Word wrap/fixed | | 0 |

Load Files: LF <enter> DSK1.FILENAME (loads entire file)
 LF <enter> 3 DSK1.FILENAME (merges FILENAME with data in memory after line 3)
 LF <enter> 3 1 10 DSK1.FILENAME (lines 1 thru 10 of FILENAME are merged after line 3 in memory)
 LF <enter> 1 10 DSK1.FILENAME (loads lines 1 thru 10 of FILENAME)

Save Files: SF <enter> DSK1.FILENAME (saves entire file)
 SF <enter> 1 10 DSK1.FILENAME (saves lines 1 thru 10)

Print Files: PF <enter> PIO (prints control characters and line numbers)
 PF <enter> C PIO (prints without Control characters)
 PF <enter> L PIO (prints 74 characters with Line numbers)
 PF <enter> F PIO (prints Fixed 80 format)
 PF <enter> 1 10 PIO (prints lines 1 thru 10)

NOTE: The above assumes that PIO, DSK1.FILENAME and RS232 are also valid!
 To CANCEL the Print command, press FCTN 4.

Delete File: DF <enter> DSK1.FILENAME

Recover Edit: RE <enter> Y or N

Line Move: M <enter> 2 6 10 (moves lines 2 thru 6 after line 10)
 M <enter> 2 2 10 (moves line 2 after line 10)

Copy: Same as Move except use C instead of M.

Find String: FS <enter> /string/ (will look for string in entire file)
 FS <enter> 1 15 /string/ (will look for string in lines 2 thru 15)

Replace Str: RS <enter> /old/new/ A(11), N(ext) or Y(es, this) case S - Stop

Delete: D <enter> 10 15 (deletes lines 10 thru 15 in memory)

Setting Margins and Tabs: (16 tabs maximum)

L - Left margin I - Indent T - Tab R - Right margin
 Use <ENTER> to execute, or COMMAND/ESCAPE to terminate command.

