

DELAWARE VALLEY USERS GROUP: JUNE 1986

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 The Data Bus Editor -- Jack E. Shattuck,
 Telephone: 302-764-8619, or use the DVUG mailing address as is shown on Page One.
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DELAWARE VALLEY USERS GROUP LOCATIONS:

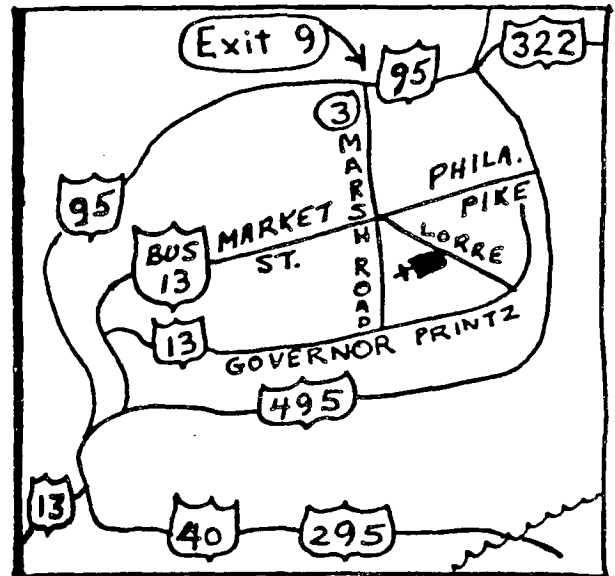
Plenary meetings: Delaware's Christiana Mall on Rte. 7, at I-95 Exit 4-S, in the Community Room. Enter between J.C. Penney and Liberty Travel inside the Mall. Call Tom Klein, 215-494-1372 or others above.

DELMARVA CHAPTER: Kent County Courthouse, Basement Conference Room #25, The Green & State Street, Dover, Delaware. Use entrance on The Green side. Contact: Jim England, 302-674-9256.

SO. JERSEY CHAPTER: Deptford Municipal Building, Cooper Ave. and Delsea Drive, (Rtes. 534 & 47), in Gloucester County. Enter and park in rear of the building. Contact: Carol Rosowski, 609-228-2445.

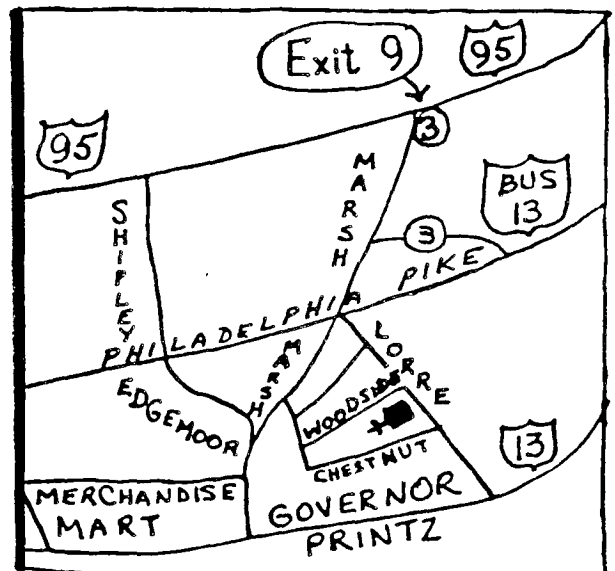
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CALVARY EPISCOPAL CHURCH
 1.2 MI. FROM I-95 EXIT 9

- POSSIBLE CLASS SITE -



DUUG DOINGS

MAY 8 DELMARVA MEETING - Kay Guillen, Secretary

Twelve persons were present.

BULLETIN BOARD ACTIVITY:

The phone line for the Kent County TI 99 Users Group (DUUG's Delmarva Chapter) BBS, (302) 674-1449, has been installed in Jim England's house. Cost was \$56, with monthly \$13.35 charges. Wayne Kay is helping with installation. It should be on line when you read this.

Needs for the BBS were discussed - a modem cable, 32K Memory, 2nd drive (only one now available), spike protectors. Hours were approved of 6 p.m. - 6 a.m., with the BBS shutting down during storms, vacations, with advance notice on the BBS.

Wayne Kay offered to donate a surge protector for a raffle prize. Other suggestions: assorted software; a Volksmodem, cable and TEII; an Extended Basic cartridge; an RS232 card or standalone; and a console dustcover, with various prices per chance. It was voted that a 1st, 2nd and 3rd prize be offered at \$3 per chance. First prize - RS232 and cable OR standalone; 2nd prize - the Volksmodem and peripherals; 3rd prize - the spike protector.

Raffle chances to finance large items may be extended to Christiana and Deptford DUUG meetings.

INTERNAL ORGANIZATION AND BY-LAW AMENDMENTS

Rita Locey accepted chairmanship of refreshments committee; Tom Gale, (301) 678-8739, will be our publications, as well as software, librarian.

The name KENT COUNTY TI 99 USERS GROUP will stay the same for the bank account and local publicity, which otherwise will include the reference: Delmarva Chapter, DUUG. Jim England's name and phone number, (302) 674-9256, will be our permanent contact. (Motion by: Ken Ayers)

We'll add a TIBBS - SYSOP committee, with Chuck Bowers and one or two others representing us at DUUG TIBBS meetings, which meetings would be required. (Motion by Jim England)

The Nominating Committee will be changed from five to three officers, due to the size of our club, and elections will be changed from August to January [in proximity to other DUUG elections - Ed.]. Present officers will remain until January, 1987. (Motions by Oscar Dawson)

There is no provision made for meeting time and place standards, therefore we'll continue to meet the second Thursday of each month, in Room 25 of the Kent County Courthouse. (Motion by Rita Locey)

Our disk library will eventually include DUUG programs as well. The \$15 yearly membership entitles members to THE (DUUG) DATA BUS, club software, etc. NON-members are welcome at two meetings without paying dues; after that, we'll ask either \$2 per meeting OR the \$15 yearly dues.

The meeting concluded with Jim England taking the 50/50. Bill Godshall will continue his Panasonic demonstration at the June 12 meeting.

(Ed. Note: We continue to have a lack of minutes from the Deptford meetings of the So. Jersey Chapter. Volunteers, please contact Jack Shattuck. D/V 80 files from E/A or TI-Writer will do fine. Thank You!)

MAY 22 CHRISTIANA MINUTES - Lynn Acquard, Secretary

Although the turnout was a little on the light side, the May meeting was full of interesting things. After the treasurer's and secretary's reports, President Tom August requested reports from the committees.

John Webb, chairperson of the software committee, is still looking for people to review programs now in our library; also he always welcomes new donations to the library - so come on all you programmers out there!

Equipment committee chairperson Jim Foltz is having a little problem. The same people are bringing their equipment all the time! This is just not fair. Jim suggests a "piecemeal" arrangement. Get together with two or three other people and each one of you bring one piece of equipment; one bring the TV, one the console and the other the P-box and you're all set! Several people have done this in the past and it works out real well. So either get your own group together, or see Jim and he can match you with someone else.

Jack Shattuck, our newsletter editor, announced that he still is trying out different formats - please let him know which you find the most (or least) readable. We still need columnists - pick your favorite computer-related topic - then get writing! Let's swamp Jack with articles! Ideally a monthly column would be the most desirable, but see Jack. You can arrange to have space every other month or for just one issue. This is YOUR club and YOUR newsletter - let's hear from you.

The meeting continued with a discussion of the discovery of a second meeting site. This has been an on-and-off discussion for quite some time. While the Christiana Mall is very convient to most members, the space in our meeting room has more than cut in half.

Especially in the winter when attendance is up, this room can get really crowded. It has been suggested in the past that we find another location, but it is hard to beat the price we currently pay (this room is FREE, if you didn't know). Well, we now have a possible new place: the Calvary Episcopal Church, located off of the Philadelphia Pike in Wilmington. While it is a little further off of I-95 than the mall, it does have several classrooms, where several different discussions could go on at the same time. After some discussion, it was decided that we would schedule an EXTRA meeting one month, probably in July, to hold classes and discussion groups in the church. The exact date will be in the newsletter and on TIBBS. In the meantime, let us know the topics you would like to see offered at the special meeting. If this works out, we can have as many different classes as YOU want!

The last bit of new business concerned the rising cost of running the club. Our biggest expense is this newsletter - both the printing and mailing. One member suggested giving the newsletter out at the meeting and only mail it to those who miss the meeting; or charge extra dues to those who wish their newsletters to be mailed. However, it was also noted that the past couple of months we have saved on printing costs; several people have donated paper and others have volunteered to do the actual printing, either free or at a reduced rate. We really do not want to raise dues. Any other ideas?

The meeting was then turned over to Jim Davis. The program this month was about the basic editor, followed by a demonstration of "XB Detective", a search program which will (among many other things) locate and list all variables in a given Basic or xBasic program - protected or not! This was shown by Jack Shattuck.

See you next month!

HOW TO CONVERT ASSEMBLY PROGRAMS TO PROGRAM FORM FOR FASTER LOADING AND LESS DISK SPACE - Written by Darren Leonard, Pittsburgh Users Group, on an idea by Marty Kroll Jr. - CONTINUED from THE DATA BUS, Vol.4:4, p. 8.

HOW TO CONVERT FROM DECIMAL TO HEXADECIMAL

This might appear quite intimidating, but I assure you that it is very simple. I will not go over the principles of HEXADECIMAL numbering systems because that is beyond the scope of this article. I will, however, show you how to convert to it.

Decimal	Hexadecimal	Binary	Octal
0	0	0	0
1	1	1	1
2	2	10	2
3	3	11	3
4	4	100	4
5	5	101	5
6	6	110	6
7	7	111	7
8	8	1000	10
9	9	1001	11
10	A	1010	12
11	B	1011	13
12	C	1100	14
13	D	1101	15
14	E	1110	16
15	F	1111	17
16	10	10000	20
17	11	10001	21
18	12	10010	22

A D I N F I N I T U M . . .

The number in the left column represents the numbers with which you are familiar. In the second, third and fourth columns are the equivalent numbering systems.

Take A from CALL PEEK(8228,A,B). Say it is 213 which is in decimal. Divide by 16 (213/16 = 13.3125).

Take the part to the left of the decimal point, which in this case is 13, and convert to Hex from the above chart. 13 = D.

Now take 213-(13x16) = 5 and this equals 5 in Hex. Therefore, your Hex number is D5 which equals 213 decimal.

Do the same for B, and add the D5 to what you obtain for B. If the first digit is not A,B,C,D,E or F, you have an invalid address, or you have incorrectly converted to Hex.

By doing the exact reverse of the above, you can go from HEX to DECIMAL.

[Readers may prefer the Barry Traver conversion program in THE DATA BUS, Vol.3:6 (July,1985), p.8 -Ed.]

TROUBLESHOOTING THE PROCEDURE

If you encountered an error in steps 1-11, there is still hope!

If you received an error in step 9 when you attempted to load your assembled program, and that

error was a 'DUPLICATE DEF', you may attempt to figure which is the duplicate: SFIRST, SLAST or SLOAD by two ways.

1) If you have DISKO, load it up and search your program file for SFIRST, SLAST or SLOAD on your disk and change them to TLOAD, TLAST or TLOAD AT EVERY PLACE THEY OCCUR!! BE SURE TO CHECK THE LAST 3 SECTORS OF THE PROGRAM THOROUGHLY!!

Then go back and try STEP 9 AGAIN.

2) Change the Assembly program in 7 to allow all combinations.

```

DEF SFIRST,SLAST
SFIRST EQU >A000      Try it eliminating all three
SLAST EQU >A+B        one at a time.
END
    
```

If that doesn't help, try eliminating two of the words:

```

DEF SLAST              Then try using only SFIRST
SLAST EQU >A+B        then SLOAD.
END
    
```

If this doesn't work you will have to wait until part 2 of this article comes out [! Sorry! - Ed].

HOW TO ELIMINATE AUTOSTART FUNCTION ON D/F 80 PROGRAMS

If your program autostarts, you cannot use the above procedure because it will take over control of the machine. You can remove that feature if you have DISKO.

Load up DISKO and examine the last 3 sectors of your program for the following (in hex mode):

```

20314523462020
  ^^  ^^
    
```

The thing to look for is the 31 and the 46 with an address between them. Change the 31 to a 40 or change the entire sequence to 20. After the change, it should look like this:

```

20202020202020 or 20404552462020
  ^^  ^^          ^^  ^^
    
```

IMPORTANT! MAKE SURE YOU DO THIS ON A BACKUP COPY OF YOUR PROGRAM ONLY!!!

You may need to look back a few more sectors if you are unable to find it in the last 3.

Incidentally, you may be able to find the program name of your program if you forgot it by searching the last 2 sectors of the program for the word. Also, the 31xxx46 must come before the :99/4 code on the last sector of the program.

I hope this article is useful to you, and if I get around to it, I will write another article on how to convert those unusual programs that cannot be done with this method. - Darren Leonard, Editor PUG, 1218 Michael Drive, Pittsburgh, PA 15227 (412)885-1502



MEMORY: SECTOR DUMP WITHOUT "DISK"



```

NOTE BY THE DATA BUS EDITOR: 430 FOR A=START TO FINISH ST
                                EP 16
                                440 CALL PEEK(A,B(0),B(1),B(
                                2),B(3),B(4),B(5),B(6),B(7),
                                B(8),B(9),B(10),B(11),B(12),
                                B(13),B(14),B(15))
                                450 IF A<0 THEN D=A+65536 EL
                                SE D=A
                                460 C=D :: GOSUB 570 :: PRIN
                                T #2:ADDR$;
                                470 FOR X=0 TO 15
                                480 C=B(X) :: GOSUB 550 :: PR
                                INT #2:B$(X);
                                490 NEXT X :: PRINT #2:" ";
                                500 FOR X=0 TO 15
                                510 IF B(X)<32 OR B(X)>126 T
                                HEN B(X)=42
                                520 PRINT #2:CHR$(B(X));
                                530 NEXT X :: PRINT #2 :: NE
                                XT A
                                540 CLOSE #2 :: STOP
                                550 IF C<256 THEN H22=C :: F
                                =F+1 :: GOTO 590
                                560 IF C<256 THEN H22=C :: F
                                =F+1 :: GOTO 590
                                570 H1=C/4096 :: H11=(H1-INT
                                (C/4096))*4096 :: IF INT(H1)
                                >9 THEN H5=INT(H1) :: GOSUB 6
                                50 :: H1$=H5$ ELSE H1$=STR$(
                                INT(H1))
                                580 H2=INT(H11)/256 :: H22=(
                                H2-INT(H11/256))*256 :: IF I
                                NT(H2)>9 THEN H5=INT(H2) ::
                                GOSUB 650 :: H2$=H5$ ELSE H2
                                $=STR$(INT(H2))
                                590 H3=INT(H22)/16 :: H33=(H
                                3-INT(H22/16))*16 :: IF INT(
                                H3)>9 THEN H5=INT(H3) :: GOSU
                                B 650 :: H3$=H5$ ELSE H3$=ST
                                R$(INT(H3))
                                600 H4=INT(H33) :: IF INT(H4)
                                >9 THEN H5=INT(H4) :: GOSUB 6
                                50 :: H4$=H5$ ELSE H4$=STR$(
                                INT(H4))
                                610 IF F=1 THEN B$(X)=" "&H
                                3$&H4$ :: GOTO 640
                                620 IF F=2 THEN F=0 :: B$(X)
                                =H3$&H4$ :: GOTO 640
                                630 ADDR$=" "&H1$&H2$&H3$&H4
                                $&" "
                                640 RETURN
                                650 H5$=SEG$("ABCDEF",H5-9,1
                                ) :: RETURN
                                100 ! Extended Basic Memory
                                110 !   Dump to Printer
                                120 !
                                130 !   Use decimal values
                                140 !   ranging 0 to 65535
                                150 !
                                160 ! Program dumps HEX and
                                170 !   ASCII to printer.
                                180 !
                                190 !   LOW MEMORY RAM
                                200 !   8192 to 16383
                                210 !
                                220 ! J.Floyd Mid-America 99
                                230 !   Users Group
                                240 !
                                250 !   P.O. Box 2505
                                260 !   Shawnee Mission, KS
                                270 !   66201
                                280 !
                                290 !>THIS PROGRAM IS PUBLIC
                                300 !>DOMAIN. NOT FREWARE,
                                310 !>NOT FAIRWARE!! Please
                                320 !>distribute freely. The
                                330 !>author only asks that
                                340 !>his name remain in one
                                350 !>Remark statement.....
                                360 !
                                370 CALL CLEAR :: DIM B(16),
                                B$(16)
                                380 INPUT "DECIMAL START ADD
                                R:":START :: IF START<0 OR S
                                TART>65520 THEN 380
                                390 INPUT "DECIMAL STOP ADDR
                                ":FINISH :: IF FINISH<START
                                OR FINISH>65536 THEN 390
                                400 OPEN #2:"PI0",VARIABLE 9
                                6
                                410 IF START>32767 THEN STAR
                                T=START-65536
                                420 IF FINISH>32767 THEN FIN
                                ISH=FINISH-65536

```

Low Memory Ram, Decimal 8192-16383, i.e. >2000-3FFF, contains Strings, PABS and Dynamic Symbol Table, a Line Number Table and (crunched) Program Space, when the 32K Expansion Memory is not on. WITH the 32K, the last two items and numeric values are moved into High Memory RAM (starting at >A000).

 TI-99/4A MEMORY MAP
 AVAILABLE IN LIBRARY

DVUG has received a DV/80 file 7 pages long, which provides an exhaustive list of memory addresses for the TI from >0000 through >3FFF.

The 95-sector listing, designed for printout in 80 columns, is being placed in DVUG libraries for members' use at Christiana, Deptford, and DelMarVa meetings.

The listing was printed in the Central Westchester May CALL SOUNDS newsletter, and provided as a courtesy on disk by Editor Art Byers, on request by THE DATA BUS.

 CONTRIBUTIONS WANTED

THE DATA BUS is sent to almost four dozen other User Group in the United States and Canada. (See the update on page 9 of this issue from the list of groups published previously.)

In order to continue the reciprocal free newsletter exchanges, we need articles from OUR OWN members so this newsletter will be worthy of interest. WRITERS, anyone?

ERROR TRAPPING TECHNIQUES - By Ted Mills, CALL SOUNDS
Newsletter, Central Westchester 99'ers, May, 1986

(Editorial Remarks by Art Byers, C.W. 99'ers)

Computers generally have built-in error handling procedures. At a minimum a computer will stop when it encounters an error condition. But first the computer will store certain information, at designated memory addresses, concerning the type of error encountered and the line where the error occurred. On my Apple these error messages can only be accessed by PEEKing into memory through an error handling subroutine written into the program. Otherwise the program simply stops when an error occurs. The TI 99/4A, however, not only routinely describes the error type but the line where it was encountered as well. (In addition the 99/4A's TI BASIC has some built-in error routines that do not stop a program but rather issue a warning. One example is entering an alphabet value into an INPUT statement that expects a numerical value. Another: Extended BASIC's ACCEPT AT statement allows you to VALIDATE the type of data you want entered and will give you a WARNING "honk" and refuse to accept any other than the data specified. See page 48 of the XB manual - Ed.)

MS-DOS computers feature only a slight improvement in error handling in that the line is actually displayed after the program stops and places the cursor over the actual error.

Error handling functions are not only used to trap errors in newly written, or typed-in, programs, but also error handling routines have useful programming applications. The latter were the initial purpose of this article. However, some general comments might also be appropriate.

Extended BASIC has two error statements - ON ERROR and CALL ERR. ON ERROR simply tells the computer what to do when an error condition is encountered. Generally, ON ERROR will GOTO or GOSUB to a subroutine.

ON ERROR can be used in many ways. The most common is to keep programs from crashing when the user does something wrong such as trying to load a blank or not initialized data disk, hardware goofs, i.e., you left the door open on the disk drive, or you misspelled PIO as P10.

CALL ERR is best used for debugging a program. Once the program is error free, the CALL ERR lines can be deleted. The Syntax of the CALL ERR subprogram contains four variables describing some aspect of the error condition. The statement is in the form CALL ERR(Error Code, error type, severity, line number). Error type simply distinguishes between program errors and input/output errors. Frankly, I never have understood the usefulness of the severity message. (Neither have I! - Ed.)

So far so good! If the error is in the line where

the error condition was encountered, life becomes relatively simple. However, the error may originate somewhere else, such as a bad value generated earlier that does not show up until later. The best procedure, therefore, is to place an ON ERROR statement near the beginning of the program that GOSUBs or GOTOs an error trapping routine at the end. The subroutine should include a CALL ERR subprogram. Once the error codes and the line are identified then PRINT statements can be added to the subroutine to print out each of the variables in the line where the error condition was encountered. Watch out, though, for BAD VALUES arising from an improper use of reserved words. I once typed in a program, written in TI BASIC, using Extended BASIC. The TI BASIC version had a variable DIGIT which is an Extended BASIC reserved word.

The TRACE command is a useful supplementary debugging tool. However, I prefer to insert "I'M HERE AT (LINE)" to follow program flow. If you do use TRACE, especially on a long and involved program, it is helpful to have a screen dump in low memory to print the TRACE flow on to paper. The one by Qualitysoft works very well. (Westchester also has one in the club library for free.)

The ON ERROR statement should be a useful programming tool. I routinely insert ON ERROR statements in my program that either return to the main menu if an error occurs or saves whatever data has been entered so far to disk. It is very exasperating to lose a lot of data when a program comes to a screeching halt due to an error. Similarly, ON ERROR can be used to close a file.

Last Fall I typed in a stock charting program that could chart a lot of price data that I had accumulated. Among the inputs for each data point were the day, month and year. These I entered in through READ/DATA statements. To check for typing accuracy, and to count the weeks, I included a subroutine which read and printed the data items. Instead of using an end of data identifier I simply used an ON ERROR message to save the data to disk as soon as I had run out of DATA statements.

Some programmers hold forth that a fully debugged and properly written program should not need error traps, except to guard against the hardware errors discussed above. They consider use of ON ERROR as a programming tool to be somewhat inelegant, but I believe it provides an important measure of safety which I like.

One final comment. It is possible to have many ON ERROR routines in the same program, as long as each one is turned on and off at the right time. For example, I usually insert an "ON ERROR GOTO (Menu)". However, an "ON ERROR (Save File)" heads my insert data routine. After the file is saved then I return to the "ON ERROR GOTO (Menu)" command.

DELAWARE VALLEY USERS GROUP: JUNE 1986

SOFTWARE COPYRIGHTS -
A LITTLE DISCUSSION

by
Tom Geldner

This article original appeared in the May 1985 issue of "ORANGE BYTES", the newsletter of the North Orange County Computer Club, and is reprinted from its publication in "CHUG - Newsletter of the Capital Health Users' Group, Inc.

ORANGE BYTES Editor's Note: In the publishing of this article, there was thought that an opinion from an attorney would be helpful to clarify the legalities of what was being presented. I sent the article (in its form below) to Gilbert A. Thomas, Attorney at Law, whose area of practice is patents and copyrights. His comments follow Tom Geldner's article and are published as I received them. Many thanks to Mr. Thomas for taking the time to reply and share his insight into the article with us.
- Bill Mead

STATE OF AFFAIRS - I am not a lawyer. I am co-owner of a software company (Xpert Software) and am vitally concerned with the distribution of software (authorized and unauthorized). I do read a lot however, and what I have to say here results from that experience and a great deal of experience working in consumer products marketing and advertising where copy-righting is a way of life.

As it stands right now, computer software is legally protected by copyright laws - the same laws that protect video tapes of movies, books, magazine articles, music, etc. Computer software does not seem to be patentable (unless made an integral part of some hardware component, and even then, such protection is doubtful).

Copyright laws convey upon the owner of the copyrighted product certain rights, the most basic of which is the EXCLUSIVE right to sell or distribute the product. THIS DOES NOT INCLUDE THE RIGHT TO CONTROL THE USE OF THE PRODUCT. Nine out of 18 people go wrong right here. The right to control the use of the product is established as an agreement between the seller and the buyer. In other words, the buyer must agree to allow the seller to control the use of his product. If the buyer does not

agree, then, of course, the seller's recourse is to not sell the product to the buyer.

MYTH #1 - THE LICENSE AGREEMENT

The last paragraph sounds like a license agreement, doesn't it? You betchum. That's exactly what it describes...a contract between two parties agreeing to something.

OK, so what about that piece of paper that comes with Wordstar (and SuperCalc and dBase II and on and on) that says:

"1. If you bought this software for your Kaypro, and you have the audacity to run it on your Trash-88, we have the right to take our software back (and your girlfriend as interest).

"2. You may not resell this software unless you transfer all copies including the manuals to the new owner, and get the new owner to sign a license agreement, and get the new owner to pay Enormous Software, Inc., a transfer fee, and provide Enormous Software with the new owner's name, address, social security number, sexual preferences, etc..."

(Here's my favorite, no funny stuff, a straight quote from Digital Research's "Operating System End User License Agreement," aka CP/M).

"3. CUSTOMER agrees to make no more than five (5) copies of the SOFTWARE for backup purposes and to place a label on the outside of each backup diskette showing the serial number, program name, version number and the DRI copyright and trademark notices in the same form as the original copy." (Gosh, Gary, does that mean that you're going to sue me when I SYSGEN that 6th disk? And gee, Gary, I tried making copies of your labels, but they don't look too good since all I can use here are my crayons.)

As you may be able to tell by my sarcastic tone, license agreements ain't worth the paper they are printed on. And here's why:

As stated above, license agreements are essentially contracts between the seller and the buyer. Therefore, both parties must agree to the terms of the contract IN ADVANCE OF THE SALE. This is the primary reason 99.4 out of 100 license agreements are garbage - the buyer got a copy of the agreement after the purchase of software. Suppose you bought a box of cornflakes only to find a piece of paper inside stating that "because you bought these cornflakes, you now owe General

Mills \$10,000.00." That's essentially what most software houses would like you to believe.

What about the packages that read:

"READ THIS NOTICE CAREFULLY !! DO NOT OPEN THIS PACKAGE UNTIL YOU HAVE READ THE LICENSE AGREEMENT !! If you don't agree to the terms, return the package unopened for a full refund."

More garbage!!!! Federal trade laws (specifically the Uniform Commercial Code and FTC Regs) make it clear that when money exchanges hands between buyer and seller, a sale has been made and the seller may not ADD to the terms or conditions of the sale after that point.

Suppose you mail a check for \$189.88 to XYZ Software Sales for VisiCalc. In return, you get VisiCalc. Do you have to return Visicalc if you don't like their license agreement? OF COURSE NOT!! The license agreement amounts to conditions added to the sale AFTER the sale has taken place (the moment the copyright holder or his representative accepts your money). They were willing to sell you VisiCalc without you having read and agreed to their license agreement in advance; they cannot make you agree to it after the sale has taken place.

MYTH #2 - COPIES, COPIES AND MORE COPIES

What about backup copies? What about using software on more than one system?

Here's the basic rules - when the seller sells you a piece of software (regardless of any phony license agreements), the software is yours - YOU OWN IT. You may USE it in whatever manner you see fit! There is one catch, though - you may only use one copy at a time!

Can you make 28 copies of CP/M? YES, but only one of them can be in use at a particular time. If you have two computers, and you only purchased one master copy of CP/M, then you can only run one computer on CP/M at a time. That is, you can't have one computer waiting for a modem call while you are busily processing words on the other.

Can you loan your copy of Wordstar to a friend? YES, but only if you do not retain control of any of your copies of Wordstar while he has it (simply not using Wordstar is probably not enough). This is probably the most violated copyright law (and is the section applicable to software pirating). How many people do you know that have four or five different word

SOFTWARE COPYRIGHTS
CONTD. FROM P. 7

processing programs, of which only one was bought and paid for?

Can you trade software? YES, but only if you don't keep a copy of the software you are giving up.

Can you alter code? YES, you own the copy of Wordstar so you can legally patch that one to your heart's content. ALTERED CODE PROBABLY CANNOT BE RESOLD OR TRADED LEGALLY (without permission of the copyright holder).

Can you legally use a program like Locksmith to copy protected programs? YES.

Can you sell copies of public domain software that you didn't write? As far as I can determine from the law, probably YES. Even if the program has been distributed to the public free and even if it carries a copyright notice, the method of distribution may constitute a de facto waiver of copyright.

All of the above comments concern what is LEGAL, not what is moral or ethical. Selling public domain software is NOT ethical in my opinion. However, making wholesale coding changes to a PD program and then selling doesn't bother me at all. There are many routines found in assembler programs that can only be written one way (XMODEM things for example). To claim copyright violation by a commercial program using XMODEM protocol is ridiculous. Also, most PD programs have a colorful history of various authors that makes determination of copyright ownership completely impossible. For example, Irv Hoff has recently placed a copyright notice on MDM728. Does this mean that Irv owns the parts written by Ward Christiansen, Keith Peterson, Perfuson, et al? I don't think so... In fact, I don't think anyone owns anything in MDM728. Maybe if the individual authors had copyrighted their own subroutines, but this has never been done.

There is a rule in law: If a thing looks like a duck, walks like a duck and quacks like a duck, it is probably a duck. This is the basis for much of how the courts view copyrights. If the conditions for a license do not exist, then no license exists. If the conditions for a

determinable copyright do not exist, then no copyright exists.

I know that all of this disappoints most software authors who struggle as it is with rip-off copies and stolen source code, but I am simply reporting the way the laws work. I am personally disappointed as well. The only solution is stronger laws governing copyrights with special attention to the unique situations incurred by software.

Oh, by the way, this document is:

Copyright 1984, Thomas A. Geldner. The right to use and distribute this material for non-commercial purposes is hereby granted to remote computer systems and computer bulletin board systems. (I'll perpetuate the lie if you will...).

The following is Mr. Thomas's letter and comments:

"Dear Mr. Mead:

Copyright law protects only the author's expression of the basic concept or ideas. Thus original copyright law, if it had existed, would have protected Shakespeare's the "Taming of the Shrew" if he could prove authorship or ownership. That copyright would have since lapsed. The work that produced the modern motion picture with the same name was another expression of the same idea or concept. As another expression other than Shakespearean, it is copyrightable even if Shakespeare's idea was still copyrighted. Thus each software product that is copyrighted is the author's expression of a concept or idea he and others have.

"Mr. Geldner should be complimented on the excellent article he produced. His legal opinions or expressions are well thought out. While lawyers eager for fees will disagree with his legal conclusions, I believe the courts and the law generally will, and have, upheld his positions. I believe you should continue to express to Congress which is mostly totally unlearned in copyright matters, your opinion that more legal protection is needed for the individual expression of how computers could be used through the software they, the individuals, develop.

Best of luck to the North Orange County Computer Club.

Sincerely yours,

Gilbert A. Thomas
Patent, Trademark & Copyright Attorney"

The previous article is not to be considered legal advice to readers of THE DATA BUS. For legal information, consult a competent attorney in your home state.

Readers may wish to refer to THE DATA BUS, Vol. 3:7 (Aug.1985), p. 2-5, for a prior discussion of copyright in the computer field.

In another area of computer law, the U.S. House of Representatives has passed H.R. 4718, the "Computer Fraud and Abuse Act of 1986", sponsored by Rep. William J. Hughes (D-N.J.). The Bill amends Title 18 of the U.S. Code, Section 1030. It provides fine and/or imprisonment up to 5 years, or up to 10 years for multiple offenses for the purposeful intent to defraud by access without proper authorization into a "Federal interest" computer, thereby gaining "anything of value"; altering the data base; preventing another from authorized use; or causing others loss of \$1,000 or more within a one-year period.

There are also provisions which upgrade values previously specified in different provisions of the law. The "Federal interest" is defined as those matters affecting interstate/foreign commerce and various Federal financial institutions. The law is focused on credit card password abusers.

It does not have any of the harsh provisions which seemed to have caused concern to various Users Groups as was discussed in THE DATA BUS, Vol. 3:8 (Sep. 1985), p. 6-7, regarding SYSOP's responsibilities about abusive users of local boards.

DVUG members who've recently made announcements about their plans to set up local Bulletin Board Systems in the State Of Delaware, and were concerned about potentially abusive new users, may wish to consult the latter article or the Brandywine Law Library for info on Delaware Computer Related Offenses, under Title 11, Sections 931-939 of the Delaware Code.

"Degrading" of Computer Services is found under Sec. 934 (64 Del. Laws, Chapter 438, Article 1).

UPDATING DATA BUS LISTINGS

USERS GROUPS/DVUG NEWSLETTER EXCHANGES

In Vol. 3, No. 11 (December, 1985) THE DATA BUS listed other Users Groups and BBS number, or a unique newsletter name where applicable, if they had newsletter exchanges with the Delaware Valley Users Group (DVUG). Here's an update six months later.

NEC

Bayou 99 Users Group, P.O. Box 921, Lake Charles, LA 70602. 318-474-6144 "BAYOU BYTE"

Forest Lane Users Group, c/o Joe Gillo 4413 Cornell Drive, Garland, TX 75042, 214-995-3054 - "HARD COPY" (This group comprised primarily of TI employees.)

Greater Orlando 99ers Users Group (60 99ers), P.O. Box 1381, Maitland, FL 32751 "THE 99er". They have FIVE BBS numbers operated by club members; all are Area Code 305, on line 24 hrs. 682-3701, 682-1526, 877-6546, 894-9641 and the oldest (TITS): 889-3687.

Kansas City Computer Users Group, P.O. Box 12591, No. Kansas City, MO 64116

Michiana 99/4A Users Group, c/o David Flowers, 52836 Shearer Dr., South Bend IN 46635 (Roger B. Dooley of TENEX is apparently group Vice President.)

New Hampshire 99ers, P. O. Box 5991, Manchester, NH 03108-5991

The 99'ers Association, 3535 So. H St. #26, Bakersfield, CA 93304 - "NATIONAL NINETY-NINER" (Group discount rates, not exchange, for newsletter) - Don and Lucy Veith

West Penn 99ers, c/o John Williforth, RD #1 - Box 73A, Jeannette, PA 15644

York Area 99er User Group, RD #2, Box 2152, Stewartstown, PA 17363

BBS NUMBERS NOT PREVIOUSLY GIVEN

Boise 99ers: 208-344-1409 (Idaho)
CONNI: 614-451-0880 (Ohio)
NET 99ers: 817-795-2322 (Texas)
PUNN: 503-233-6804 (Oregon)

CHANGE OF ADDRESS/PHONE NO.

Suncoast 99'ers, 8421 Westridge Drive, Tampa, FL 33615 "THE SUNCOAST BEEPER"

TI-Birmingham User's Group, 3905 40th Avenue North, Birmingham, AL 35217 205-836-7688 "TI-BUGS NEWS"

Tidewater 99/4 Users Group Inc., P.O. Box 1935, Newport News, VA 23601 - "THE BREAD BOX" (2 Chapters) Norfolk BBS: 804-486-1484

BEING DROPPED BY DVUG (NO RECENT MAIL)

Chester County 99ers: Pennsylvania
CHUG NEWS: Chattanooga (Hixson, TN)
TIC TALK: Denver (Rocky Mountain 99ers)
TI-RUNNERS: Alberta, Canada

A FEW MORE CALL LOAD's, CALL PEEK's

To use these procedures, you need at least 32K expansion memory plus TI's Extended Basic. These haven't been tried with Mechatronic's or Myarc's XBasic. Some will work with the Editor/Assembler module, and some with Miniem, also.

What you're doing is PEEKing (CALL PEEK) at the value in a memory address to see what the computer has stored there -- or you're going to POKE (CALL LOAD in TI parlance) a particular value you want into a special address.

To run them, use CALL INIT (ENTER) and CALL LOAD(x,y) (ENTER), substituting the values below for the x and y, or CALL PEEK(P,Q) (ENTER) to look for the items specified.

Here's a sample use in a program:

```
10 CALL INIT :: CALL PEEK(-28472,A) ::
IF A=96 THEN CALL SAY("HELLO") ELSE IF
A=0 THEN PRINT "HELLO"
```

For an earlier listing in THE DATA BUS, see Vol.3, No. 4, p.8-9, and No. 5, p. 10 (May and June, 1985). These are offered by Scott Darling (72366,714) from CompuServe's TI Forum.

ADDRESS	VALUES	EFFECT
-31740,	P, Q	Varying values change beep, warnins tones
-31804,	P	Changes Cursor flash rate (0 to 255)
-31848,	0, 0	Turns off TI's 32K Expansion Memory, and
-31848,	255,231	turns it On
-31952,	P	Tells if the 32K Exp. Memory is off (P=55), or on (P<55).
-32116,	4	Go from XB to BASIC

ANOTHER SOURCE FOR THE AVATEX MODEM

Now that we heard about that 1200 Baud Avatex modem for under \$100, the number of sources seems to be on the increase (or we now know what the item is when we see it).

Here's the latest:

Item #97070, for \$100 even (Check or Money Order) from MEGATECH, P.O.Box 4213, Yalesville Station, Wallingford, CT 06492 (203)269-5323. Runs both 300 and 1200 Baud, software included; auto dial, auto answer, self test on power up, 4 other diagnostic tests. Mention you have a TI and the DVUG newsletter, THE DATA BUS, if you order.

PROWRITER/C.ITOH PRINTER CORRECTION

December, 1985 (Vol.3:11)'s DATA BUS carried a column of print codes to use for several printers. The NEC and C.ITOH list used the mnemonic codes to aid the memory. PRINT #1:CHR\$(27)&"N" was erroneously reprinted elsewhere as "H". Try thinking N = Normal, E=Elite, Q=condensed (sounds like it?), and P= Proportional printing.

Of course, N also is CHR\$(78).

PRODUCT NEWS

SOUTH JERSEY COMPUTERS
P.O. BOX 5, NATIONAL PARK, N.J. 08063
(609) 848-5963

WHEN ORDERING ANY PRODUCT LISTED IN THESE COLUMNS, PLEASE TELL THE VENDOR THAT YOU SAW IT IN THE DVUG Data Bus!

DAVE ROSE has done it again with the release of Character Sets and Graphic Designs User Diskette #3. Actually, TWO (SS/SD) disks in this package, since one has 127 small pictures (e.g., as on page 5 in this issue); the second contains 12 new font styles and 27 large pictures.

Specify your printer type (Epson, and Gemini, or Prowriter compatible) as you place your order for \$10.95 with either TEXAMENTS, 53 Center Street, Patchogue, NY 11772 (516)475-3480, or Dave Rose, at 2781 Resor Rd., Fairfield, OH 45014-5053.

NAMELOC SOFTWARE, 3971 S.E. Lincoln, Portland, OR 97214, has three items. All require 32K, XB, Disk, Epson compatible printer if used with program.

LABELMAKER V2.0 allows 5 text lines, four different fonts (Enlarged, Enlarged and Condensed ?!, Pica, Condensed), with several combination options including italic.

TIME TRAVEL prints calendar from 1601 to 2100 to screen or printer; includes a QUIZFILE history trivia quiz, and QUIZ-MAKER.

CATALOPE prints a disk envelope with catalogue on the outside.

\$5 each, check/money order, or 2/\$8, all three for \$10.

- MILLERS GRAPHICS-GRAM KRACKER. \$177.50
MBX EXPANSION SYSTEM AND BASEBALL. \$40.95
DRAGONSLAYER AUTO SPELL-CHECK. \$29.50
MILLERS GRAPHICS-ADVANCED DIAGNOSTICS. \$15.00
MILLERS GRAPHICS-EXPLORER. \$18.25
TI-MULTIPLAN, LOGO II or TI-WRITER . . (EACH). \$26.50
NAVARONE-CARTRIDGE EXPANDER ("Widgit") \$28.25
LEGEND 808 100cps PRINTER graphic capability ; \$169.00
6' PRINTER CABLE (ADD \$.50 EA. ADDITIONAL FT.) \$22.50
LEGEND 1080 140cps PRINTER Nr Let Qual + grphc \$199.00
ADVENTURE SERIES ON CASSETTES. . . . (EACH). \$4.99

6% SALES TAX FOR N. J. RESIDENTS
ADD \$3.00 POSTAGE & HANDLING; CANADA \$6.00
(ORDERS OVER \$100.00 ADD \$5.00; CANADA \$10.00)
MASTERCARD, VISA AND AMERICAN EXPRESS ACCEPTED
CREDIT CARD PURCHASE, PLEASE USE THE FORM BELOW OR FACSIMILE

Form with fields for NAME, ADDRESS, CITY, STATE, ZIP, CARD #, EXP. DATE, SIGNATURE.

ALLOW 6 TO 8 WEEKS DELIVERY
ALL ITEMS SUBJECT TO AVAILABILITY
FREE SURPRISE SOFTWARE GIFT FOR ALL ORDERS OVER \$100.00

CONTROL DATA has User Group discounts for their PLATO software. 2-5 items 10%; 6-15, 15%; 16-24, 20%; 25 or more, 25%. THIS WILL BE DISCUSSED AND CATALOGS MADE AVAILABLE AT FUTURE DVUG MEETINGS. Info: L.B. Lewytkyj, Control Data Corporation at 8100 34th Ave. So., HQB02G, Minneapolis, MN 55440 (612)853-3162.

Subscription information for Delaware Valley Users Group, including address (Stanton Branch, Wilmington, DE), contact details (Edmonton, Canada), and a note about Tiger Cub tips. Includes postage stamps and a wavy line graphic.