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JUNE EDITION

MULTIPLAN

by BJ Mathis
(reprinted from Southwest 99'ers)

The following is a combination of a group of articles I wrote over the past several years. They are being republished as an introduction to Multiplan.

MULTIPLAN is a spreadsheet that is far superior to the old handwritten entry methods of bookkeeping. It has the capability to do all adding machine functions for you. It can cross reference itself and take care of double entry information through linking of files. However, MULTIPLAN is versatile enough for the average home computer user to have a use for it.

MULTIPLAN (now called MP) can be used to keep track of your checking account. It can be used to figure your loans, allowing you to know what your payoff is at any time and what you are paying in interest. You can find out how much you will save in interest over the life of the loan by making a larger payment. MP could be used for an address file. Since it will sort alphabetically we keep track of our son's spelling lists and give him a dictionary of words he should know how to use and spell. Our treasurer uses it to keep track of our club finances. There are many other uses, only if you be creative and put your mind to it.

PROTECTION

Protecting programs against overwrite is very important. However, do not protect the file called OVERLAY on you MP disk. You will be able to load MP but you will not be able to do anything else, if OVERLAY has been protected. The other files for MP can be write protected, but if you protect a worksheet file you will not be able to load the file back in for corrections, updating, and or printing. You can copy the TIMP files onto other disks, but the disk must be called TIMP or it won't load.

Before you do anything else with MP please be sure you have selected Options ("O") and changed the Recalc to "NO", this will save you a lot of time and frustration. For MP will even 'RECALC' for text entered. When you have all your figures and text entered then re-select Options ("O"), turn on Recalc, press "Y" for YES and press enter. Having Recalc off when entering material will speed up operations significantly.

TITLES

Putting a title on your MP worksheet can be frustrating. Most people type and enter one word at a time in each of the upper cells. If they later, insert a new column or delete a column, or simply widen or narrow a column they have to retype part, if not all of their titles. Here is something to put an end to that!

Choose the formatting command. Then type R1 (or whatever row you want your title in), then TAB[CNTRL]-2 to the alignment section. Select G (for general), TAB again to the code section, type C for continuous, and press ENTER. Your title will now adjust itself in any amount of deletions, insertions, narrowing or widening of column.

If after you have done this you discover a mistake in your title, place your cursor in the first cell to your title, press E for edit. MP will display the entire title for you to edit.

You are probably already aware that in order to back your cursor up you have to use FCTN 9, however this also takes out whenever it passes over. You don't have to use this to edit. You can use FCTN 4 to back space by single position or FCTN 5 to back space by word and CTRL 4 or CTRL 5 to go forward. MP will automatically allow you to insert your corrections once you have reached the proper point in your text. However, it will not get rid of letters unless you use the Delete Forward CTRL 0 keys. Delete Forward deletes anything that is highlighted at the time it is chosen, so make sure that you are highlighting the correct part. All these keys can be used to edit formulas and values, also.

FORMULAS

There are many ways to build a formula to add a column or row of figures on a MP worksheet. Some are easier to understand than others, but they are not always the most effiecient in speed and use of memory. Others are very difficult to set up and can easily be messed up when inserting or deleting rows or columns.

One way to build a formula is to position your cursor on the desired location for the total, press "=", move the cursor to the desired beginning point, press "+", move the cursor to the next desired position, press "+",etc. until the entire area to be covered is included cell by cell. Your formula would look something like RC-1]C+RC-2]C+... This is long and tedious to set up and will often cause a REF! to show up if lines are deleted or inserted. The recalculation time is slow and the memory is quickly used up.

One function of MP allows an area to be SUMmed, in other words all the numbers in a specified area are added together. This function can be used within formulas.

A column or row with the desired information can be NAMEd. (see pg 60 of MP reference guide.) In order to use the NAMEd column or row, position the cursor at the point where you want the total to appear. Press "=", then type SUM(NAME), the total according to the parameters you set up with NAMEd will appear. In this case I have found the recalculation time to be very slow, the memory is used up very quickly, and the formula can be affected by inserting or deleting lines within the defined NAME parameters.

If you get an error message after building your formula recheck the areas you are trying to add together. Make sure you are not trying to add the total to the total to the total... This will give you a circular reference error. If the display shows #### instead of a number then your column is too narrow to display the total.

If some of your formulas give you an anwer of "#REF", recheck your formulas to see if you are trying to add a cell that has text in it. MP does not like to try to add text to numbers! Think about what you have

done since setting up the formulas. Have you added or deleted any rows or columns within the paremeters of the formula? Remember, to turn off the RECALC again before you try to fix those problems. Start with the first formula containing "#REF" Use Back Char (Fctn 4), Forward Char (Fctn 5), Back Space (Fctn 9), and Delete Forward (Fctn 0) to change the formula as needed or completely rebuild the formula. Allow RECALC to work after correcting each formula until all the "#REF"s go away.

You may also see an error message of "#VALUE", think about the formula. You may be trying to add, subtract, etc. your total to/from itself. If you insert a row or column within a formula's parameters, or move a row or column containing the formula, the formula may automatically change and calculate only part of the information you intended.

A formula copied across may try to add each column to the next, this will result in an unbelievable total in the last column. In order to correct these problems you may have to check each formula on the entire worksheet. After checking each formula select Options again and turn on RECALC.

COPY

When using MP, the Copy command is probadly one of the most useful commands. It is especially useful for setting up a spreadsheet. You can Copy right, down, or from. Each of these commands is useful for copying formula or other information to another part of your spreadsheet.

Copy From lets you copy an entire rectangular area to another part of the spreadsheet. You can copy from one single cell to another single cell or you can copy from a group of cells to another group. In order to copy from one block of cells to another you first designate the boundaries of the group you wish to copy. For instance, if you wish to copy the info in row 3 column 2 through row 7 column 5 to the areas with the boundaries of row 24 column 9 through row 28 column 12. You first chose the Copy command then chose FROM. Now type R3C2:R7C5, tab to the next section, type R24C9, press enter. Notice it is not necessary to give the computer the boundaries of the area you wish to Copy to, you only have to tell it where to start copying to, it will figure out the rest.

If you want the info in one cell to appear in another group of cells Copy From can do that too! Let's say you want the info in row 5 column 3 to appear in all cells from row 6 column 7 through row 10 column 9. You should again chose Copy/From command. The command line should read "COPY FROM cells: R5C3 to:R6C7:R10C9".

Copy Right will Copy cells to the right in the same row. If you want an item that is in row 8 column 10 to appear in row 8 columns 11 through 20, use the Copy Right command. To do this it is best to position your cursor at row 8 column 10, press "C", press "R", enter the desired number of columns, in this case, 10 and press Enter. Copy Down is much the same as Copy Right, however it copies down the column instead of across the row.

When Copying formulas with RECALC turned off the numeric value that was in the orginal cell will appear in the new position, however when you activate RECALC the numeric value changes based on the info MP finds in the cells referenced by the formulas. When you Copy a formula that contains references to a specific row or column you have to change that reference to relate to the specific row or column in it's position. Copy can also be used to Copy text. This will not change when RECALC is turned on. NOTE: It is not possible to copy to a non-blank cell.

##########

TINYGRAM written by Mike Stanfill
from Dallas 99 Interface Newsletter

You are to protect your little baby flies (the ".") from the marauding Spider (Z) which will came dangling down from above riding its silken strands. You the fly ("*") have a sting and if you touch the Spider, well it's bye/bye for him. But if you touch the web you get zapped. If by chance the Spider (Z) manages to get down to your babies the game is over. Control your fly with the arrows keys.

```
1 !*********TINYBUGZ**********   ****by Mike  Stanfill****
2 F=4 :: DISPLAY ERASE ALL:RPT$(".",28):: DIM T(33)
3 Q=24 :: CALL CHAR(88,"91D638FE385482"):: X=12 :: Y=16
4 CALL KEY(1,K,S):: X=X+(K=5)-(X=1)-(K=0)+(X=23):: Y=Y+(K=2)-(Y=2)-(K=3)+(Y=31):
: CALL SPRITE(#1,42,2,X*8-7,Y*8-7):: IF T(Y)>X THEN 8
5 IF X=T(Y)THEN T(Y)=0 :: CALL VCHAR(1,Y,32,22):: CALL SOUND(99,-3,0):: B=B+1
6 DISPLAY AT(Q,3):"FLIES=";F-1,"SPIDERS=";B :: G=(INT(RND)+1)*3 :: T(G)=T(G)+1 :
: CALL VCHAR(1,G,124,T(G))
7 CALL HCHAR(T(G),G,88):: IF T(G)<23 THEN 4 ELSE F=1
8 F=F-1 :: FOR L=1 TO Q :: CALL SOUND(-99,-2,L):: CALL LOCATE(#1,X*8-7,Y*8-7+(L/
2-INT(L/2))):: NEXT L :: IF F THEN 3 ELSE R$="GAME OVER"
9 DISPLAY AT(22,9):R$
```

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THE TIGERCUB GROWLS
by Jim Peterson
part two

Folks, when you upload a program or something to a BBS, and you are prompted for a file description -- won't you PLEASE give the complete program name, the author's name if possilbe, and the hardware required to run it? I am getting awfully tired of spending an hour or so downloading and unpacking files, and finding nothing that I want because it is something I already have (even sometimes something I wrote myself) or requiring some equipment I don't have and/or is copyrighted. Is "FILSORL" a great utility program worth downloading? Is "OTHELLO" one of the four versions I already have, or has someone perhaps written a better one? Is "the very latest version of Funnelwriter" a later version than the one I have? (Please, at least mention version numbers, that is why the authors use them!) Are you one of many who spend tons of money downloading 250 sectors of TE3SINGS from GENIE, when you find out you already have Barb Berg's TI-SINGS?

With the proliferation of programs being written for the TOOL SHED, the GRAM KRACKER, the various new versions of XB, the SUPER CART,etc., it is becoming very frustrating to even determine why a downloaded program will not run for you!

(reprinted from The Computer Bridge)
(St. Louis 99 ers Newsletter)

How many times while working on a special project have you had the whole thing come to a screeching halt, with the computer crashing, or the printer stopping or the modem outputting unintelligent garbage or even worse smoke curling ominously out of a piece of equipment?

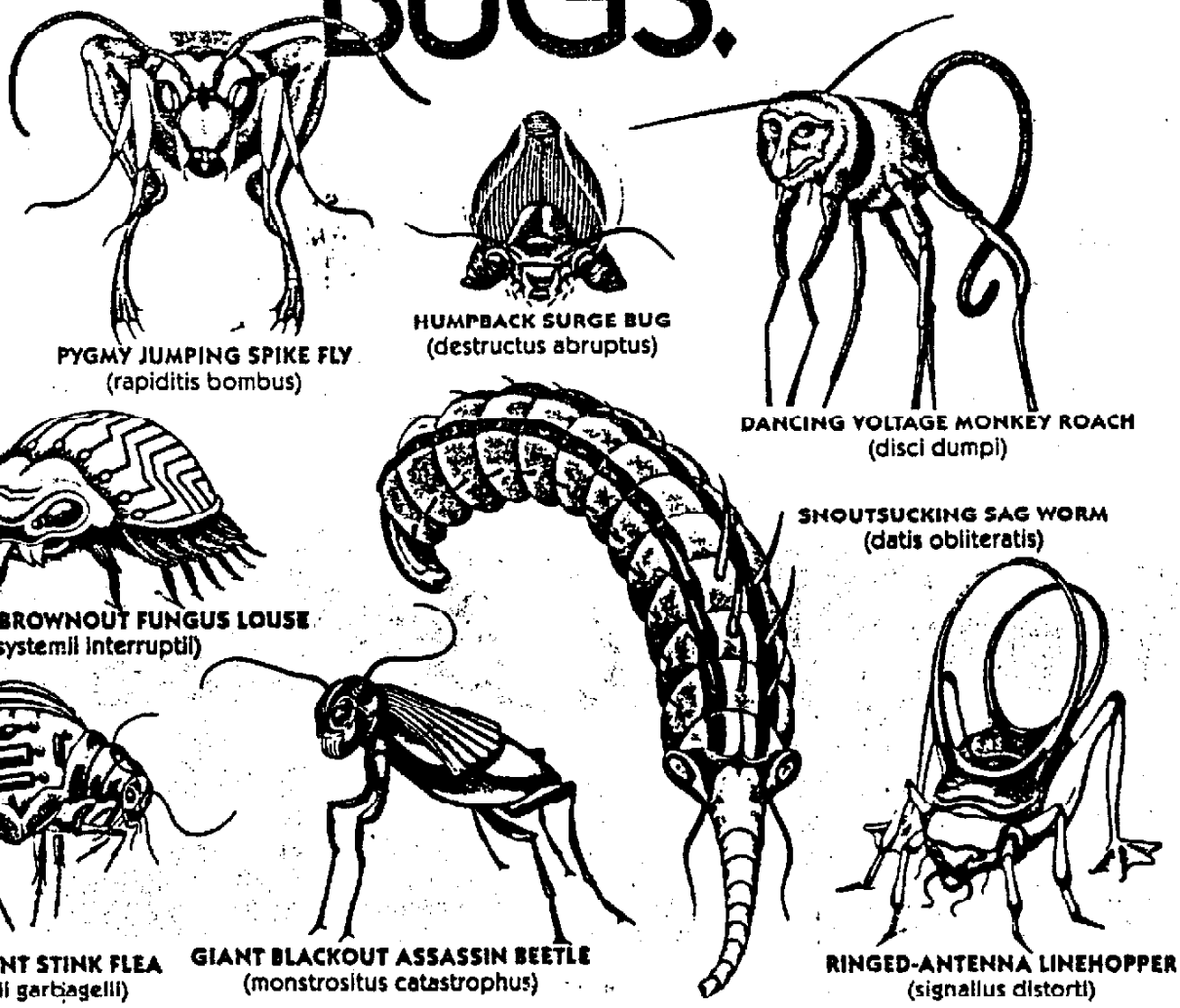
Times like these are very frustrating and usually after a few choice words about the 'bug' that caused our particular problem, we start all over again.

Some anonymous member of the computer community has finally identified these various 'bugs' and we are happy to share this information with our readers. While knowing what 'bug' caused our problem will not solve our problem we might find satisfaction in knowing which 'bug' to blame.

Below are pictures showing the various 'bugs' along with their names and how they affect our equipment.

(Reprinted from Rocky Mountain 99'ers)

KNOW YOUR BUGS.



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JULY 1988

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						2 Cousin Ethel's Birthday!
3		5 Stay in bed from too much July 4th celebrating!	6	7	8	
	11	12	13		15	16
17	18	19 Aunt Frick gets out of prison - arrange bus ticket.	20	21	22	
24 31	25	26		28	29 Cecil Broderick set his Drum set - arrange to sell house.	30

ASGARD SOFTWARE
Box 10306
Rockville, MD 20850

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        THE BLOODBANK

        Walter H. Blood

            June 1988
**************************************
100 REM BATMAN POSTER
110 REM BY WALTER H. BLOOD
120 OPEN #1:"PIO",VARIABLE 255
130 PRINT #1:CHR$(15);
140 PRINT #1:CHR$(27)&CHR$(48)
150 FOR L=1 TO 41
160 P$=""
170 READ N
180 FOR I=1 TO N
190 READ A,B$
200 FOR J=1 TO A
210 P$=P$&CHR$(32)
220 NEXT J
230 P$=P$&B$
240 NEXT I
250 PRINT #1:TAB(10);P$
260 NEXT L
270 FOR L=42 TO 122
280 P$=""
290 READ N
300 FOR I=1 TO N
310 READ A,B,C$
320 FOR J=1 TO A
330 P$=P$&CHR$(32)
340 NEXT J
350 FOR J=1 TO B
360 P$=P$&C$
370 NEXT J
380 NEXT I
390 PRINT #1:TAB(10);P$
400 NEXT L
410 PRINT #1:CHR$(27)&CHR$(64)
420 CLOSE #1
430 STOP
440 DATA 5,83,A,4,SSSSS,5,H,5,H,5,!,6
,65,CCCCC  RRRR,6,A A,3,S,9,H,5,H,5,!
450 DATA 8,65,C,5,R,3,R,5,A,3,A  S,9,
H,5,H,5,!,6,62,0 C,6,R  R,6,AAAAA,4,S
SSS,3,HHHHHHH,6,!
460 DATA 7,62,0 C,6,R R,6,A,5,A,7,S
H,5,H,6,!,6,62,0 C,6,R  R,4,A,6,A  SS
SS,4,H,5,H
470 DATA 4,62,0  CCCCC R,3,R,3,A,30,!
,2,59,000,14,R,1,56,0000 0,1,53,0000
0 0
480 DATA 1,50,0000 0 0 0 0,2,48,000 0
 0 0 0 0,31,XX,2,46,00 0 0 0 0 0 0 0,
29,X  X
490 DATA 2,44,00  0 0 0 0 0 0 0,29,X
0 XXX,2,45,00000 0 0 0 0 0 0,27,X 0
00 XXX
500 DATA 2,46,000 0 0 0 0 0 0,27,X 0
X  000 XXX
510 DATA 2,43,000 0 0 0 0 0 0 0 0,25,
X 0 XXXXXX  00  X
520 DATA 2,41,00 0 0 0 0 0 0 0 0 00,2
3,XX 0 XXXXXXXXX 00 XX
530 DATA 2,38,0000 0 0 0 0 0 0 0 0 00
,23,X  0 XXXXXXXXXXXX 00 XX
540 DATA 2,37,000000 0 0 0 0 0 0 0 0
0,22,X  0 XXXXXXXXXXXXXXX 00 XXXXX
550 DATA 2,40,00 0 0 0 0 0 0 0 0 0XX,
20,X 0 XXXXXXXXXXXXXXXXXX  0  X
560 DATA 4,39,XX 0 0 0 0 0 0 0 0 XXXXXX
,19,XX0 XXXX,3,XXXXXXXXXXXXX,2,0 X
570 DATA 2,39,XXXXXX0 0 0 0XXXXXXXXXX
,18,X 0 XXXXXXXX XXXXXXXXXXXX 0 X
580 DATA 4,5,0000000,27,XXXXXXXXXXXX
XXXXXXXXXXXX,13,XX 0 X,3,XXXXXXXXXX
XXXXX  0 X
590 DATA 6,4,0,7,0,28,XXXXXXXXXXXXXX
XXXXXXXXXXXXXX,5,XX  0 X,6,XXXXXX,3
,XXX  0 X
600 DATA 5,3,0,9,0,28,XXXXXXXXXXXXXX
XXXXXXXXXXXX  XXX,3,0 X,11,XXXXX XX
X  0 X
610 DATA 5,3,0,9,0,29,XXXXXXXXXXXXXX
XXXXXXXXXXXX0 0 0 0 0 X,4,XX,6,XXXXX
XX 00 X
620 DATA 5,4,00,6,0,30,XXXXXXXXXXXXX
XXXXXXXXXXXXX00 0 0 0 0X,5,XXX,6,XXX
X 0 XX
630 DATA 4,6,000000 00000000000,19,XX
XXXXXXXXXXXXXXXXXXXXXXXX0 0 0 0 0 0
X,6,XXXX
640 DATA 4,XX 0 X,4,11,00,11,0,20,XXX
XXXXXXXXXXXXXXXXXXXXX 0 0 0 0 0 0X,
12,X  0 X
650 DATA 4,10,0,13,0,22,XXXXXXXXXXXX
XXXXXXXXXX 0 0 0 0 0  X,10,X 0 0X
660 DATA 4,9,0,14,0,25,XXXXXXXXXXXXX
XXXXXXX 0 0 0 0 0 0 0XXX,3,XXXX 0 X
670 DATA 3,9,0,13,0,29,XXXXXXXXXXXXX
XXXXXXX0 0 0 0 0 0 0XXX0 0 0 X
680 DATA 4,10,0,11,0,7,F,23,XXXXXXXX
XXXXXXXXXXXXXX0 0X0 0 0 0 0 0 0 X
690 DATA 4,11,00,7,00,7,F FF,21,0 0 X
XXXXXXXXXXXXXXXXXXXXX0 0 0 0 0 0 0
 XXX
700 DATA 5,13,0000000,6,FFF,4,FFF,17,
0 0 0XXXXXX,8,XXXXXXXXXX 0 0 0 0 0 0
 0 0 X
710 DATA 4,24,FF,10,FF,13,00 0 0 XXXX
,16,XXXXXXX0 0 0 0 0 0 0 0 XX
720 DATA 4,21,FFF  FF,10,FFF,9,00 0 0
 0XXXX,18,XXXXXXX 0 0 0 0 0 0XXXX
730 DATA 4,17,FFFF,7,FFF,18,00 0 0 0X
XXXX,20,XXXXXXXX 0 0 0XXXXXXXX
740 DATA 4,13,FFFF,14,FF,14,000 0 0 0
 XXXXX,22,XXXXXXXXXXXXXXXXXXX
750 DATA 3,33,F,12,0 0 0 0 0 XXXXXXXX
,21,XXXXXXXXXXXXXXXXXXXX
760 DATA 3,44,6," 0",0,9,X,20,22,X,3,
43,6," 0",0,11,X,20,22,X
770 DATA 3,43,6,"0 ",0,12,X,19,22,X,3
,42,6,"0 ",0,14,X,18,22,X
780 DATA 3,41,6,"0 ",0,19,X,13,24,X,2
,40,6,"0 ",0,57,X,3,40,1,00,0,5," 0",
```

```
0,57,X
790 DATA 3,39,1,00,0,5," O",0,58,X,2,
39,6,"O ",0,58,X,3,39,1,00,1,4,"O ",0
,58,X
800 DATA 2,38,6," O",0,58,X,2,40,1,0
O O O O OX X,2,52,X
810 DATA 3,39,1,O O O O O OX,4,1,X,1,
51,X,2,40,1,O O O O OX,12,46,X
820 DATA 4,38,1,O O O O OX,14,26,X,0,
1,O,O,19,X
830 DATA 5,40,1,O O O OXOO,12,10,X,0,
6,M,O,10,X,1,19,X
840 DATA 6,39,1,O O OOXXO O OO,9,9,X,
O,1,M  O O MM,O,7,X,1,1,O,O,19,X
850 DATA 6,40,1,O OXXO O OOO OOO,8,6,
X,O,1,M  O O O M,O,5,X,1,1,O,2,19,X
860 DATA 3,41,1,OXO O O O O O OOOOOOO
,6,1,XMO O O O OMXXXX O O,1,19,X
870 DATA 5,40,1,XXO O O O O O O OOO O
,8,1,M   O O O O,O,7,M,O,1,XO,O,19,X
880 DATA 5,41,11,"O ",7,1,M,2,7," O",
O,5,M,O,16,X
890 DATA 5,40,11,"O ",9,1,M,O,10," O"
,O,1,M,O,15,X
900 DATA 5,39,1,O O.XXXXXXX.O O O O O
 OOOO,7,5,M,O,8," O",O,2,M,O,13,X
910 DATA 6,39,14,X,O,1,.O O O O O OOO
 OO,6,1,MMOO,1,7,"O ",O,1,M,O,12,X
920 DATA 4,38,17,X,O,1,O O O O O O O
OOOO,4,1,OMM MMOO O O O O OM,O,12,X
930 DATA 3,37,20,X,O,1,OO O O O O O O
 OOOO   OMO MMM O O O O OM,O,11,X
940 DATA 4,37,22,X,O,8,"O ",O,1,OO O
O OMO M O O O O M,O,11,X
950 DATA 4,36,24,X,O,9,"O ",1,1,O O O
 O M O O O OM,O,10,X
960 DATA 4,36,25,X,O,7,"O ",O,1,OO O
O O O O M O O OOM,O,9,X
970 DATA 4,36,25,X,1,8,"O ",1,1,O O O
 O O MO OMMM,O,9,X
980 DATA 6,36,26,X,1,7,"O ",3,5,"O ",
O,1,MOM,1,5,"O ",O,1,X
990 DATA 7,36,26,X,O,1,O,1,14,X,1,6,"
O ",O,1,MO,2,5,"O ",O,1,X
1000 DATA 3,36,42,X,O,14,"O ",O,1,X,3
,36,42,X,1,14,"O ",O,1,X
1010 DATA 3,36,42,X,O,15,"O ",O,1,X,3
,36,42,X,1,15,"O ",O,1,X
1020 DATA 3,35,43,X,O,15,"O ",O,1,OX,
5,35,25,X,O,1,O,O,17,X,O,16," O",O,1,
X
1030 DATA 5,35,25,X,O,1,O,1,16,X,O,16
,"O ",O,1,OX
1040 DATA 5,33,26,X,O,1,O O,O,16,X,1,
16,"O ",O,1,X
1050 DATA 5,31,27,X,O,1,O O,1,16,X,O,
16,"O ",O,1,OX
1060 DATA 5,30,26,X,1,1,O O O,O,16,X,
1,16,"O ",O,1,X
1070 DATA 5,28,27,X,1,1,O O O,1,16,X,
O,16,"O ",O,1,OX
1080 DATA 4,27,25,X,O,1,.O O O O O,O,
16,X,1,1,O O O O XXX O O O OXXXXXX O
O O O X
1090 DATA 5,26,26,X,2,1,O O O O,1,16,
X,O,1,O OXX OXX  XO O OXXX,6,1,X O O
OX
1100 DATA 6,24,7," O",O,13,X,4,1,O O
O,2,19,X,1,1,XXX    X OXXX,10,1,X O O
 X
1110 DATA 7,24,7,"O ",O,11,X,7,1,OOO,
3,16,X,4,1,X,6,3,X,13,1,XO O X
1120 DATA 5,23,8,"O ",O,8,X,15,15,X,1
2,1,X,16,1,XO X
1130 DATA 4,21,9," O",O,6,X,17,15,X,2
9,1,X X,4,20,10," O",O,3,X,19,15,X,29
,1,X X
1140 DATA 4,19,11," O",O,1,X,20,15,X,
30,1,X,5,20,1,O,O,9,"O ",O,2,O,9,8,O,
4,14,X
1150 DATA 6;19,1,O,O,8,"O ",O,3,O,10,
4,"O ",O,2,O,3,14,X
1160 DATA 6,19,8,"O ",O,2,O,12,1,O,O,
4,"O ",O,3,O,1,13,X
1170 DATA 4,18,7,"O ",O,3,O,13,7," O"
,O,13,X
1180 DATA 6,18,1,O,O,6,"O ",O,2,O,16,
1,O,O,6,"O ",O,13,X
1190 DATA 5,17,1,O,O,7,"O ",18,2,O,O,
5," O",O,13,X,4,17,7,"O ",20,1,O,O,5,
"O ",O,13,X
1200 DATA 5,17,1,O,O,6,"O ",22,2,O,O,
4," O",O,13,X,4,17,6,"O ",24,1,O,O,3,
"O ",O,14,X
1210 DATA 3,16,6,"O ",26,1,OO O O,1,1
3,X,3,16,1,OO O O O O,28,1,O O O O,1,
12,X
1220 DATA 3,15,1,OO O O O O,30,1,O O
O O,O,12,X,3,14,1,OO O O O,34,1,OOO O
,1,11,X
1230 DATA 3,12,6,"O ",34,3,O,1,10,X,3
,10,1,OO O O O O OO,38,1,O,3,6,X
1240 DATA 1,9,1,OO O O O O O O O,1,8,1,
OO O O O O O O,1,7,1,OO O O O O O OO
1250 DATA 2,6,1,OO O O O O O O O,12,9
,P,3,5,1,OO O O O O O O OO,9,3,P,7,1,
P
1260 DATA 3,4,1,OO O O O O O O OO,7,3
,P,7,4,P,3,3,1,OO O O O O O O OO,8,1,
P,6,3,P
1270 DATA 4,2,1,OO O O O O O O OO,9,1
,P,2,4,P,16,1,W
1280 DATA 5,1,8,"O ",O,2,O,9,3,P,10,5
,O,5,1,W
1290 DATA 8,1,7,"O ",O,2,O,11,1,P,10,
2,O,5,1,O,3,1,W,4,3,W,3,1,W
1300 DATA 5,O,7,"O ",O,2,O,11,1,P,10,
1,O,7,1,O  W   WW W   W
1310 DATA 5,1,6,"O ",O,2,O,12,1,P,9,1
,O,6,1,OO   W WW   W WW
1320 DATA 6,2,6,"O ",13,1,P,9,1,O,5,1
,O,4,3,W,4,1,W W
1330 DATA 4,3,8,O,27,5,O,4,2,W,5,3,W,
2,54,1,W,4,1,.
```

PROGRAMS THAT WRITE PROGRAMS
Part 4
by Jim Peterson

Well, if you have tried your hand at any MERGE format program writing, you have already discovered that it is slow work, and you need to cram more onto a line than will fit. When a little CALL HCHAR(24,12,32,5) turned into CHR$(157)&CHR$(200)&CHR$(5)&"HCHAR"&CHR$(183)&CHR$(200)&CHR$(2)&"24"&CHR$(179)&CHR$(200)&CHR$(2)&"12"&CHR$(179)&CHR$(200)&CHR$(2)&"32"&CHR$(179)&CHR$(200)&CHR$(1)&"5"&CHR$(182) you gave up? There is an easier way! Using DEF can make the job so simple that you might decide to do all your programming in MERGE format - well no, it's not quite that easy.

The DEF does slow up program execution time considerably, especially when DEFs call each other, but we can tolerate that here.

For instance, that complicated mess of parentheses to squish a line number can be written just once as DEF LINES$(X)=CHR$(INT(X/256))&CHR$(X-256*INT(X-256)) and then, whenever you need a line number, just write LINE$(100) or whatever.

The flag token and counting of characters and all for an unquoted string can be DEF'd as U$(X$)=CHR$(200)&CHR$(LEN(X$))&X$ Then, to write "HELLO" just write U$("HELLO") and let the computer do the work. For a numeric value in the unquoted string, use UN$(X)=CHR$(200)&CHR$(LEN(STR$(X)))&STR$(X), and then 999 becomes UN$(999).

CALL HCHAR can be DEF HCHAR$=CHR$(157) for CALL and, since one DEF can call another, U$("HCHAR") and, since it is always followed by an opening parentheses, CHR$(183) - but wait, let's define that open parentheses as OP$=CHR$(183).
Now DEF HCHAR$=CHR$(157)&U$("HCHAR")&OP$, and you can use HCHAR$ for CALL HCHAR(.

Let's also DEF the comma with DEF C$=CHR$(179) and the closing parentheses with DEF CP$=CHR$(182). Now that long HCHAR that had you discouraged can be abbreviated to CHAR$&UN$(24)&C$&UN$(12)&C$&UN$(32)&C$&UN$(5)&CP$.

I have written a program of 162 of these DEFs, and another program to print out a handy look-up chart of them. It would take 4 pages to print them, so if you want them just ask me for a copy.

(to be continued next month)

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PEEKS AND POKES
by Barry Ensley
reprinted from The Computer Voice)

CALL PEEK(8191,A,B)
This PEEK will let you know if CALL INIT has already been executed in your program. It can save you from wiping out any A/L routines you may already have in memory. Try this in your program.
10 CALL PEEK(8198,A,B) :: IF A=170 AND B=85 THEN 20 ELSE CALL INIT

CALL LOAD(-31962,160,4)
If you have a RUN statement in your program, replacing it with this POKE will speed up the restart. Since it will not pre-scan your program the second time.

CALL LOAD(-31962,33,111)
This POKE from Command Mode will jump you from XB to Console Basic.

REMEMBER WHENEVER POKING OR PEEKING BE CAREFUL NOT TO HAVE A PROGRAM LOADED THAT YOU DO NOT HAVE SAVED. IT COULD WIPE IT OUT!

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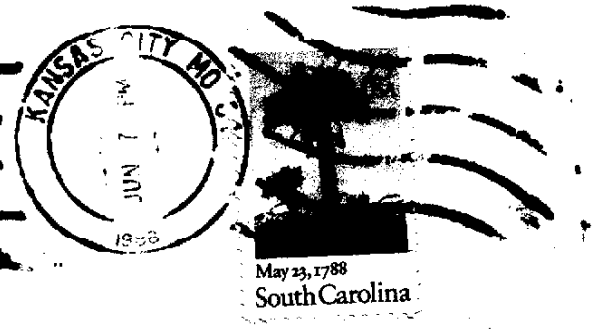

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FROM THE EDITOR

As you will find with any editor of a Computer Club newsletter, there is always the need for fresh and new material to be published. Where is this source of material to be published? It comes from you, the club member. Now I am sure that the members do not always like to see reprints from other newsletters covering the pages of their own newsletter. So what can be done?

This editor has come across an idea which a few other newsletter editors have tried or implemented. The following suggestion or proposal is given so that you as members may be encouraged to particpate in your newsletter.

KC 99'ER CONNECTION will publish any ORIGINAL articles dealing with computers (such as program reviews, tricks and tips, etc.). It must be ORIGINAL material to qualify for what is about to be suggested.

In return for your submissions to our newsletter (that is, with each article given) you will be allowed to withdraw 3 programs from our the KC TI99/4A exchange library. Now where else could you get 3 wonderful programs for an ORIGNAL article to keep your newsletter fresh and creative?

PLEASE CONSIDER THIS SUGGESTION AND GET YOUR FINGERS A WRITING.

the editor - Steven DeGeare