

NUT I NEWS

* NITTANY USERS OF TEXAS INSTRUMENTS *

D. Snell, Pres. (Actg)

FEBRUARY 1991

M. Villano, Ed.

Send Exchange Newsletter to NUTI 625 Wiltshire Dr. State College, Pa. 16803 (Do NOT send to the MUG) Materials may be copied. Cite author & NUTI NEWS.



TI-99/4A



DESERT



STORM



GENEVE

ARTICLES BEING FEATURED THIS ISSUE

TIPS FROM THE TIGERCUB No. 60. J. PETERSON's helpful hints for XB. NEW-AGE/99 No. 12. SUGHRUE reports new software company for TIers. NJ FAIRE. FAMILY COMPUTER EXPO (formerly TICOFF) scheduled Mar. 9.

NEW MEETING DATE, LOCATION REPEATED

Monthly meetings have now changed to third Saturdays at 1:30 PM at the PSU Campus in Rm. 104, Earth & Mineral Sciences Museum (Steidle Bldg). NEXT MEETINGS: Sat., Feb. 16, 1991. No March meeting (MIEC 1E-16th).

1991 MIEC & COMPUTER FAIR:

As will have been discussed at the very next meeting, NUTI is participating in the Tenth Annual Microcomputer Information Exchange Conference and Computer Fair at the Penn State's Conference Center on Friday afternoon, March 15th, and on Saturday morning until noon or mid-afternoon, March 16th, 1991. David Snell and Maurice Villano plan to be there and will set up a 4/A and a Geneve and associated software and gear. They will need support at the tables passing out literature, and in putting on demonstrations of your favorite TI programs. NUTI software library will be available to copy disks and tapes. Give David & Maurice a call if you can help.

PROJECT DESERT STORM TROOPS SALUTED

Members of NUTI do hereby express their support of our gallant service men and service women, fighting for this country, in the Persian Gulf.

TIPS FROM THE TIGERCUB

No. 60

1 June 1990

My stock of TigerCub Software catalogs is depleted and it would not pay me to reprint it. Therefore I have released all copyrighted TigerCub programs, except the nuts & bolts disks, for free distribution providing that no price or copying fee is charged. All of my TigerCub programs have been added to my TI-PD library and are cataloged, by category, in Supplement #8.

My three Nuts & Bolts disks, each containing 100 or more subprograms, have been reduced to \$5.00. If I run out of printed documentation, it will be supplied on disk.

My TI-PD library now consists of 400 disks if fair-ware (by author's permission only) and public domain, all arranged by category and as full as possible, provided with loaders by full program name rather than filename. Basic programs converted to XBasic, etc. The price is just \$1.50 per disk(1), post paid if at least eight are ordered. TI-PD catalog #2 with Supplement #8, listing all titles and authors, is currently available for \$1 which is deductible from the first purchase.

Here are a couple of improvements to the CHARFIX subprogram published in Tips #8.

```
29000 SUB CHARFIX(HX$(1)):: D
  DISPLAY AT(12,1)ERASE ALL BEE
  P: "Transliterate punctuation
  ?" :: ACCEPT AT(12,20)SIZE(1)
  IVALIDATE("YM"):QS :: IF QS=
  "M" THEN 2900A
  29007 CALL CHARVIEW(HX$(1))
  29009 SUB CHARVIEW(HX$(1))
```

Anyway, I thought I would use the same method to solve precise multiplication of

And call the routine by CALL CHARFIX(HX\$(1)). These changes will avoid unwanted transliteration, and will make it possible to use CHARFIX for ASCII 24-31 and 14-159, if BXT has been merged in, as described in Tips #55.

The Spring 1990 issue of the TI*ES newsletter from England contained an interesting challenge - write a program in any language to find the lowest power of 7 which contains six sevens in succession, i.e. "777777".

The computer cannot solve this by any normal means, because it soon goes into scientific notation in which large numbers are rounded off into long strings of zeros. So, I taught it to multiply the old-fashioned way -

```
101 AS=STR$(7):: Y=1
111 Y=Y*7 :: FOR J=LEN(AS)TO
1 STEP -1 :: E=VAL(SEG$(AS
,J,1))*7*(X)^(10
121 X=INT(E):: F=(E-X)*10 ::
X=STR$(F)&X :: NEXT J
131 IF X=0 THEN X=STR$(X)&X
$
141 IF POS(X$,"77777")=1<>0
THEN 160
151 AS=X$ :: X$="" :: X=0 ::
GOTO 110
161 PRINT "7":STR$(Y):="":X
$
170 PRINT #2:"7":STR$(Y):="
":X$
```

The answer? 7^15=78011207 9120815810240464 2791118077 77718818200693206111839698 5715038584402667 7799156864 716998933126566440734763224 8557164949399539 2586437943

My TI-99/4A computed that in 24 minutes. Would someone like to try it on the 9640?

Myway, I thought I would use the same method to solve precise multiplication of

numbers too large to be computed directly. This routine will multiply two numbers of up to 28 digits each, and will handle decimals and negative numbers. For even larger numbers, change the ACCEPTs to INPUTs and if necessary change the DIM. The only limitation seems to be that the result cannot contain more than 256 digits; and even that could be programmed around.

```
100 DIM CS(100)
110 DISPLAY AT(12,1)ERASE AL
L:"FIRST NUMBER?": ACCEPT
AT(14,1)VALIDATE(NUMERIC)BEE
P:AS
120 IF SEG$(AS,1,1)="-" THEN
AS=SEG$(AS,2,255):: M=1
130 A=LEN(AS):: D1=POS(AS,"
",1):: IF D1=0 THEN AS=SEG$(
AS,1,D1-1)ISEG$(AS,D1+1,255)
:: D1=A-D1
140 DISPLAY AT(16,1)ERASE AL
L:"SECOND NUMBER?": ACCEPT
AT(18,1)VALIDATE(NUMERIC)BEE
P:BS
150 IF SEG$(BS,1,1)="-" THEN
BS=SEG$(BS,2,255):: M=M+1
160 Y=LEN(BS):: D2=POS(BS,"
",1):: IF D2=0 THEN BS=SEG$(
BS,1,D2-1)ISEG$(BS,D2+1,255)
:: D2=Y-D2 :: D1=D1+D2 :: Y
=Y-1
170 FOR J=Y TO 1 STEP -1 ::
W=M+1 :: B=VAL(SEG$(BS,J,1))
:: FOR K=LEN(AS)TO 1 STEP -1
:: A=VAL(SEG$(AS,K,1))
180 D=(A*B+X)/10
190 E=INT(D):: F=D-E*10 ::
CS(J)=STR$(F)&CS(J):: X=E
: NEXT K
200 IF X=0 THEN CS(J)=STR$(X
)&CS(J)
210 CS(J)=CS(J)&STR$(10*(W-1)
)
220 X=0 :: NEXT J
230 L=LEN(CS(1)):: FOR J=1 TO
D Y :: L2=LEN(CS(J)):: IF L2
<L THEN CS(J)=RPT$(10,(L-L2)
)&CS(J)
240 NEXT J
250 FOR J=LEN(CS(1))TO 1 STE
P -1 :: FOR K=1 TO X :: G=V
AL(SEG$(CS(J),J,1)):: NEXT
K
```

```
260 G=(G*H)/10 :: L=INT(G)::
G=(G-L)*10 :: DS=STR$(G)&DS
:: H=L :: G=0 :: NEXT J
270 IF H<0 THEN DS=STR$(H)&D
S
280 IF D1=0 THEN DS=SEG$(DS,
1,LEN(DS)-1)&".".&SEG$(DS,LE
N(DS)-D1+1,255)
290 IF M=1 THEN DS="-"&DS
300 PRINT DS
```

And this one will add up an almost unlimited number of integers of almost any length - I haven't figured out how to get it to line up decimals.

```
100 CALL CLEAR :: DIM CS(100
)
110 DISPLAY AT(12,1):"Input
from 0:" (B)isk or:" (K)
eyboard?": ACCEPT AT(14,12
)VALIDATE("DK")SIZE(1):G$
: IF G$="K" THEN 140
120 DISPLAY AT(12,1)ERASE AL
L:"Filename? DSK": ACCEPT
AT(12,14):G$ :: OPEN #1:DSK
"&G$,INPUT
130 X=X+1 :: LINPUT #1:CS(X)
:: M=MAX(LEN(CS(X))): IF E
OF(1)<>1 THEN 130 ELSE CLOSE
#1 :: GOTO 160
140 DISPLAY AT(12,1):"Press
ENTER when finished":
150 X=X+1 :: INPUT CS(X):: M
=MAX(LEN(CS(X))): IF CS(X)
)<M THEN 150 ELSE X=X-1
160 FOR J=1 TO X :: IF LEN(C
S(J))<M THEN CS(J)=RPT$(M-
M,LEN(CS(J))&CS(J)
170 NEXT J :: FOR J=M TO 1 S
TEP -1 :: FOR K=1 TO X :: G=
VAL(SEG$(CS(K),K,1)):: VEX
T K
180 G=(G+H)/10 :: L=INT(G)::
G=(G-L)*10 :: DS=STR$(G)&DS
:: H=L :: G=0 :: NEXT J
190 IF H<0 THEN DS=STR$(H)&D
S
200 PRINT DS
```

It is easy to invert characters on the screen simply by making the foreground "on" pixels a lighter color than the background "off" pixels - but when you make a

screen dump, you will find that the "on" pixels will print and the "off" pixels will not.

Key this in, SAVE it by SAVE DSK1, INVERSE, MERGE and then merge it into any program by MERGE DSK1, INVERSE, call it at any point by CALL INVERSE(A,B). (A and B are the first and last ASCII to be inverted), and you will have all "on" pixels turned off and vice versa.

```

5111 SUB INVERSE(A,B) FOR
  CH A TO B :: CALL CHARPAT(C
  CH)
5112 FOR J=1 TO 16 :: CH2$
  CH2$=M$(G1)*FDCBA976543210
  POS1=123456789ABCDEFGHI*SF6$
  (CHR,J,1),1,1) :: NEXT J
  CALL CHAR(CHR,CH2$) :: CH2$=""
  :: NEXT CH
5113 SUBEND

```

Here is a truly remarkable discovery by Bill Hudson of the Central Ohio Ninety Niners. This 2 line program will allow you to RUN a variable name such as AS="DSK1,PROGRAM"

You can write lines before these, after these and even REC the program. You can also use MOVE from GK UTILITY. You can do anything to the program you wait as long as you don't change the content of line 1000. The line number does not even have to be 1000 BUT IT MUST BE THE FIRST LINE THAT YOU KEY IN!! You can merge a program into this but can't merge this into a program. Line 900 can also be a different line number but program execution must go to that line first.

```

900 FOR Z=1 TO LEN(AS):: CAL
  L LOAD(-A)+Z,ASC(SEG(AS,Z)
  ),0) :: NEXT Z :: CALL LOAD(
  -A)+LEN(AS):: CALL LOAD(-44
  ,A)+LEN(AS)
1000 RUN "DSKx.1234567890"

```

It's been a long time

since we had a screen display to watch just for the fun of it, so here is a program:

```

100 CALL CLEAR :: FOR SET=1
  TO 14 :: CALL COLOR(SET,SET+
  1,SET+2) :: NEXT SET :: CALL
  SCREEN(2) :: CALL VCHAR(1,1,3
  1,768)
110 FOR CH=32 TO 136 STEP 8
  :: CALL CHAR(CHR("FOOOO00000
  000FF")) :: NEXT CH
120 X=INT(RND*(1)*2-1) :: Y=
  INT(14*RND*(1)*8-2) :: FOR R=
  12-K TO 12-INT(RND*(X)) :: CALL
  HCHAR(R,5,Y,R)
130 CALL HCHAR(15-R,5,Y,R)
140 CALL HCHAR(1,28-R,Y,R)
150 CALL HCHAR(15-R,28-R,Y,R)
160 ON INT(2*RND*(1)+6)GO 170,
  190
170 CALL HCHAR(1,4+R,Y+8,25-
  R*2)
180 CALL HCHAR(15-R,4+R,Y+8,
  25-R*2)
190 NEXT R :: GOTO 120

```

This is a challenging and educational math puzzler which I think is unlike anything you have seen I had it in my TigerCub catalog for 7 years and sold just 18 copies. If you don't want to key it in, it is now one of the programs on TI-PD disk to 1500.1.

```

900 GOTO 140
10 J,K,ST,LV,L,R(1),I,X,A,AS
  X$,B,B$,C,C$,D,D$,AY,BY,B$S
  BY$,CY,CYS,C$Q,Q,Y,I),Y$,X$C
  ,FLAG,RS,RL,Z,YY,QQ(1),QS
20 CALL CLEAR :: CALL CHAR
  :: CALL COLOR :: CALL VCHAR
  :: CALL SCREEN :: CALL KEY
  :: CALL SOUND
30 IAP-
40 CALL CLEAR :: FOR J=1 TO
  12 :: CALL COLOR(J,5,16) ::
  NEXT J
150 CALL VCHAR(1,3,32,672) ::
  DISPLAY AT(5,1) :: "0123456789
  10THMATH A+*#10
160 DISPLAY AT(10,1) " Selc
  : difficulty level - : " Ty
  pe 1 or 2"

```

~~~~~  
W-AGE/99 \* NEW-AGE/  
99 \* NEW-AGE/99 \* N  
EW-AGE/99 \* NEW-AGE  
/99 \* NEW-AGE/99 \*  
~~~~~

* by JACK SUGRUE, Box 459, East Douglas, MA 01516 *
#12

MICKEY REVISITED

Last time in NEWAGE I spent lots of time talking about Mickey Schmitt's two books (THE ADVENTURE REFERENCE GUIDE, \$9.95 + \$2 S+H, from Asgard, Box 10306, Rockville, MD, 20848, and GETTING THE MOST FROM YOUR CASSETTE SYSTEM, \$9.95 + \$2.50 S+H, from the author - Mickey Schmitt, 196 Broadway Avenue, Lower Burrell, PA, 15068). In the interim, I've also written a lengthier article about the new and wonderful ways to use cassettes based upon Mickey's cassette book which appeared in REFLECTIONS. There are a couple of disks available for user groups (or individuals) who have cassettes still active. These two different chock-full disks include all the items referred to by Mickey and many others not yet mentioned by her and can be gotten for a \$5 shipping/handling fee each by asking for "Cassette Master Disk" from M.U.N.C.H., 560 Lincoln Street, P.O. Box 7193, Worcester, MA, 01605-7193; and "TI PD 1205.1 Cassette Utilities" from TigerCub, 156 Collingwood Avenue, Columbus, OH, 43213. Add an extra \$1 to TigerCub's disk request and ask for Jim Peterson's PD Catalog, the largest collection of the best of the least expensive treasures in the TI World.

If your user group hasn't yet purchased Mickey's cassette book and used it as a fund-raiser, then your group is missing a great opportunity to make some green.

Some other things have happened since I wrote that original article. Mickey has formed a new - NEW! - company of all TI stuff.

Doesn't that have a nice ring to it? A new TI company. The MS stands for the two partners: Mickey Schmitt and Mike Sealy. They can be reached at MS EXPRESS SOFTWARE, P.O. Box 498, Richmond, OH 43944. This dynamic duo made their professional debut at the Chicago Fair in November and released a pile of stuff:

ADVENTURE HINTS (Series I) by Lynn Gardner, which is unique in help concepts for adventurers. Each hint loads into the console in the same way the Adventure Module disks load. In addition to loading as stand-alone help, these hints can also be loaded into the specific programs and called up from a running program! These disks include built-in maps AND hardcopy maps. Nice feature. This first series includes some of the adventures written by Mickey and Lynn: OLIVER'S TWIST, RATTLESNAKE BEND, ZOOM FLUME. The same kind of two word (noun/verb) commands are used to ask for help, so there's no need to use all kinds of colored cellophane papers, special invisible ink pens, plastic decoding devices, whatever. Requires Adventure Module or interpreter.

GALACTIC EMPERORS by Eric Kepes, an Extended BASIC, multi-player, strategic simulation program. You and one, two, or three others are each trying to thwart opponents by accessing control to all the planets in the galaxy. Shades of the Darth Vader! There are decisions you and your opponents make beforehand (such as the number of planets) before the computer generates (new each time) the playing grid. Although many random events occur during the game play, the game is a mental

```

the sum of the other digits"
450 DISPLAY AT(8,1) " that
  is the number?" :: ACCEPT AT
  (20,2)VALGATE(DIGIT)STRE(4)
  BEEP:Q :: IF Q=X THEN 50
460 Y(1)=INT(Q/1000) :: (2)
  INT((Q-100*Y(1))/100) :: Y(3
  )=INT((Q/100-INT(Q/100)*10)
  :: Y(4)=(Q/10-INT(Q/10)*10
  :: IF Y(4)<>INT(Y(4)*N) THEN
  570
470 IF Q=X THEN 490
480 IF Y(1)>Y(2) THEN 570
  ELSE 500
490 IF (Y(1)<>Y(2))*2+BY*Y(1)
  C<>Y(2)*2-BY THEN 570
500 IF Q=X THEN 520
510 IF Y(1)<>Y(4)+Y(3)+Y(1)
  HEM 570 ELSE 530
520 IF (Y(1)<>Y(4)+Y(3)+Y(1)
  +Y(1)*Y(3)<>Y(4)+Y(3)+Y(1)
  ) THEN 570
530 DISPLAY AT(22,1) " Some
  cti" :: FOR J=1 TO 2 :: C
  ALL SOUND(100,392,5) :: CALL
  SOUND(100,440,5) :: CALL SOUND
  (1100,494,5) :: CALL SOUND(110
  0,523,5)
540 NEXT J :: CALL SOUND(100
  0,523,5,292,5,330,5)
550 DISPLAY AT(24,1) " Hit a
  ny key"
560 CALL KEY(0,K,ST) :: IF ST
  <1 THEN 560 ELSE 200
570 DISPLAY AT(22,1) " Wrong
  ." :: CALL SOUND(900,3000,3
  0,3000,30,400,30,4,0) :: DI
  SPLAY AT(25,1) " Type A to t
  ry again or Z" to see the
  number"
580 CALL KEY(0,K,ST) :: IF ST
  <1 THEN 580
590 IF K=5 THEN 450
600 IF K=9 THEN 610 ELSE 50
  0
610 DISPLAY AT(22,1) " The n
  umber was:"X" :: GOTO 550
  :: END

```

Nearly out of memory and all out of ideas. Move next time, maybe.

Jim Peterson

TigerCub

challenging activity that can be saved to continue play at a future date.

(Both of the above are \$9.95 + \$1 S+H and require the standard minimum configuration of one SSSD drive and 32K.)

Finally from MS EXPRESS, there are SLIDING BLOCK PUZZLES (Series I) and SLIDING BLOCK SOLUTIONS (Series I) each \$7.95 - \$1 S+H and both by Norman Rokke, the same person who brought you the extraordinary Fairware graphic/text program "1000 WORDS," one of the very best of its kind ever.

In this case, Norman has transcended the "normal" sliding block puzzles with which we are so familiar. In the late 1800's Sam Loyd, America's most ingenious puzzle maker at the turn of the century, created the 14-15 sliding block puzzle. There are lots of these out for the TI. The best I've seen is Chris Bobbitt's Public Domain version of many years ago and in all group libraries.

These puzzles, however, are considerably more challenging than the originals. There are three on this disk and all can be saved in mid-game, so one doesn't have to begin all over again.

The first consists of nine different-colored tiles and supposedly can be solved in 59 moves. Puzzle #2 is made up of 10 blocks and could be completed in 81 moves. The hardest (#3, of course) has 11 tiles to shift and can be solved in 90 moves. A colored monitor or TV to go with your XB, 32k, and minimum disk drive system are required.

You need the these puzzles before you get the solutions' disk, which provides the help you need for each puzzle in little pieces so as not to ruin the game for you. Very user-friendly, like all things Norman does. And, of course, ingenuity by him is taken for granted.

Now that we have a new company supporting TIers, let's hope the TI Community supports the new company. Your support will encourage even more authors to stay with and write for the 99.

I continue to get letters from cribbage buffs all over the TI World asking about a program I reviewed last year. The program is written by Gene Hitz. He even rewrote it after I gleefully stated how I found a way to cheat on the "Go". He chastised me for cheating our little 99 computer. Now, the computer catches me each time when I try. This program is called "Cutthroat Cribbage" and gives you a muggins if you count incorrectly. It's fun to play and is fast and friendly. The game can be purchased for \$7 from ARCADE ACTION, Program Innovators, 412 Glenway, Wawatosa, WI 53222. Actually, for \$10 you get a diskful of games, including a nice version of TETRIS and piles of others. If you are a cribbage player, I'd recommend this game highly. If you'd like to learn the game, ask for the longer version (though I think he sends both versions, anyway), because this will give you the option to have the computer count up any combinations to see how things are scored. Then get yourself a HOYLE's from the library and play your TI until you got the game down pat. Excellent midnight companion.

Besides TIGERCUB's \$1 catalog of Public Domain disks (truly the BEST BUY in the TI World), everyone should send off for Asgard's newest catalog. Asgard's latest, particularly for Page Pro owners, is a mouth-watering collector of delectable delights. For game players, William Reiss's TOURNAMENT SOLITAIRE (which includes - along with KLONDIKE - PYRAMID, GOLF, COMERS, PILE-UP, CANFIELD, and CALCULATION) is terrific. But call or write for the free catalog and notice the high level of your droolability.

East Coast Computer Show - 6th Year

FAMILY COMP EXPO & HAM RADIO FEST Roselle Park H.S.

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SPECIAL NOTE

As a key item, we will have a Packet Radio Setup through the Armed Service Radio Net so that messages can be sent to servicemen involved in Project Desert Storm in Saudi Arabia. This is free of charge!