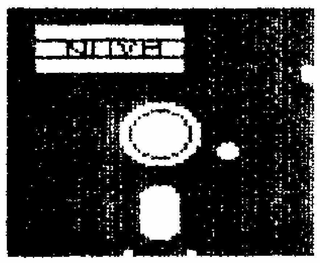
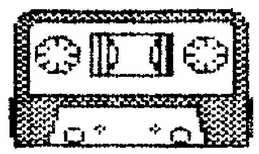
NOVA

P.O. Box 508 Vancouver, Wa.
98666

NINETY-NINERS OF THE
VANCOUVER AREA





VANEWS #92
MARCH 1991

NEXT MEETING: MARCH 26th
7:PM Vancouver Mall
Community Room (near Penneys)
NEXT WORKSHOP:
11:AM to 4:pm Vancouver Mall
Community Room **APRIL 7th**
N.O.V.A. BBS: 206-687-4497 8N1

NOVA OFFICERS

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206-693-7575
Vice President
Quinton Tormanen
206-687-4972
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Editor
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TI Fair
Dan Lisson
206-693-7575

"ON LINE WITH THE NOVA BBS"

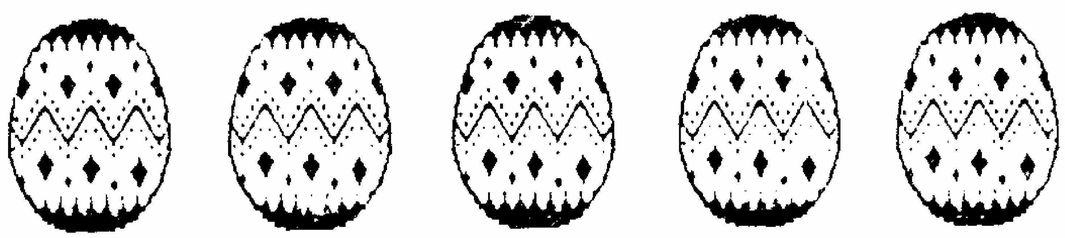
As of Monday the 18th our BBS has logged 5367 calls and continues to function without program errors. For those who have called recently they have found a new message base devoted entirely to Want Ads and items For Sale. This will allow any caller to leave their own ad.

Don't miss our next business meeting as we will be having an auction. The items up for bid are:

2	consoles
1	PE Box with
	TI RS-232
	TI Disk Controller
	TI 32K Memory
	SS/SD Full Height Drive
1	Dual Drive Auxillary Box
	(with 2 SS/SD Drives)
1	Navarone Widget
3	Power Supplies
2	RF Modulators
1	Console Cover
1	Cassette Cable
1	Speech Synthesizer
1	PIO Printer Cable
1	Pair TI Joysticks
1	TI XB Cart with manual
1	TI Multiplan package
1	TI-Writer package
1	SAMS TI-99/4A Trivia Data Base
1	TI Invaders
1	Household Buget Management
1	Tombstone City
1	Black Jack and Poker
1	Alpiner
1	Munch Man
1	A-maze-ing
1	Hunt The Wumpus

Bring your bucks to the auction and get what you need or desire.

As a reminder, the software library also has blank disks for sale for $3.00 for 10 disks. A great deal!



COMMUNICATIONS

Omega-TI

THE NATIONAL "TI-ECHO"

FOR THE TI-99/4A & GENEVE 9640 USERS

The topic of this article is the network and how to connect with it.

Are you missing out? There's a national TI Conference that you can probably access LOCALLY, without the monthly fee for commercial services like Compu$erve, GEnie, or Delphi.

The network is called FidoNet and the TI-Echo is one of many conferences available to users. Access into the network is via one of the nearly 10,000 local BBS systems in the US and Canada.

For an isolated TI user group the TI-ECHO can provide up-to-date information on what's new, like the new "DeZipper" program by Ben Yates or Gary Bowzer's "Zmodem" for the TI!

If you have questions about hardware, software or system bugs, someone on the network CAN and WILL answer your questions. You might even hear directly from the software authors such as TI-ECHO participant Beery Miller.

HOW TO OBTAIN ACCESS

Check out the BBS systems in your local area. If one of the systems is identified as a Fido node, ask the sysop to PLEASE carry the TI-ECHO. It is IMPORTANT that you inform the sysop that the TI-ECHO is on the "BACKBONE" and that traffic averages between 7-15 messages daily. The term "BACKBONE" is important to sysops as it tells them they will not have to make any additional calls and it will come via the normal feed. Informing them of the traffic size is a courtesy and it will insure that you will probably get the ECHO. Some sysops do not like to carry numerous echos that have 100-200 messages a day (i.e. Star Trek: The Next Generation, Genealogy).

The following are numbers of FIDO systems that support the TI and carry the TI-ECHO. Special thanks goes to Walter Tietjen for netmailing the numbers.

STAR ONE .....Tulsa, OK
9600 HST.....1 (918) 835-8933

TI-RALEIGH.....Raleigh, NC
1200.....1 (919) 833-3412

RADIO FREE.....Milwaukee, WI
9600 HST.....1 (414) 352-6176

FULL MOON.....Memphis, TN
9600 HST.....1 (901) 386-1750

BOB'S PLACE.....Pittsburgh, PA
9600 HST.....1 (412) 344-8504
2400.....1 (412) 341-5313

Out-of-date address information removed.

SHARING KEEPS THE TI COMMUNITY ALIVE!

N.O.V.A. NEWS

Greg Hedrick was contacted by the Battleground Community Education Class codinator and asked if we would be interesld in instructing a class for the TI again. This was done once before and was quite a success. We aquired several members frm that venture and can probaly attract others that still have their TI's tucked away. Anyone interested in this should contact Greg at 206-687-3516. Date for this has been set for Tuesday, May 14, 6:30 to 9:30pm.

Reminder; Delmar Wohlgemuth will re-ink your printer ribbons bring them to the meetings or workshops. $1.50 is a bargain considering the cost of new ones!

The next meeting we will be having an auction of a compete TI system. These have been lots of fun in the past and some profits for the treasury too!

We are still looking for some-one to do the printing of this newletter.

Articles for the newsletter are always needed, let me know by the 15th of the month if you have an article or a suggestion.

$ → N.O.V.A.

Once again our club members have given their time to help our club treasurey. Delmar Wohlgemuth secured the date of Friday March 8th, at the Gee Creek Rest Area to provide coffee and refreshments to the travelers on I-5. Darris and Beryl Sinden gathered the supplies and equipment and also worked two shifts. Delmar Wohlgemuth, Cal Oberg (who brought his computer and had lots of questions), Rich Gilbertson, Mike and Myrt Calkins, all equally worked a 4 hour shift. Cookies were donated by Beth Webber, Dee Williams, Delmar Wohlgemuth, Mike and Myrt Calkins, Gayle and Richard Bentz and Maria Adler. Many thanks to all who participated. Thank for your time and effort.

Our treasurey received about $199.00 from this effort. We have enough supplies left to do this 3 more times if we can get more dates at the rest area. All weekends are currently booked, but we will try to fill any cancelations. Please be ready to donate your time and cookies when needed.

USING A MODEM

Part 3

Well, here we are with part three. The first two articles dealt with some advantages of modeming, approximate costs, interpersonal modem uses, calling computer bulletin boards (BBS's), accessing your bank account, determining whether some libraries have the books or other materials you want, and whether these are already on loan or available, different "baud rates" i.e. speed of data transmission, and some other details.

As I reread the earlier articles prior to beginning this one, I noted that I may have confused some of you regarding the "AT" commands. If you are using the 300-baud Volksmodem, TI acoustic modem, or one of Radio Shack's Signalman series--the Mark 3, for example--, you will not need to use these AT commands. Placing your telephone handset securely in the cradle will make the connection for the TI acoustic model; the other modems mentioned have a "voice-data" position to make the connection. If the party you are communicating with has a modem with the AT-type connection routine, they proceed in that manner while you do what I outlined above. Sorry if I caused you any problems by not mentioning this before!

Several fears of modem usage that appear to be prevalent among some beginners are: he'll (the BBS system operator or the other person in an interpersonal transfer) think I'm really stupid because I'll make a lot of mistakes; I'll do something really dumb that will mess up the BBS and cause the operator a lot of money and frustration (I'll BREAK it!); I won't be able to read what is coming across fast enough; I won't remember what to do next and will get really confused and frustrated. There are probably others, but these appear to be the major ones. The following paragraphs will address each of these in turn.

"He'll (she'll) think I'm really stupid...". Not so! Your chances of encountering such an insensitive individual are minimal. Most system operators (SysOps) don't sit and watch their monitors 24 hours a day, so the chance of your fumbling being noted is slim. If the SysOp does notice, he/she will probably break in on Chat mode and type helpful suggestions to get you going. You can type back your responses and questions (don't forget to go into HALF DUPLEX so that you can see what you're typing!). Following this interchange, the SysOp will put you back into terminal mode and you just continue from where you left off. If you are working across the line with just one other person, rather than a BBS, that person has probably encountered the same problems earlier that you are encountering now, and can thus be specifically helpful. Also, most modem users and SysOps WANT you to be successful at this activity that they themselves enjoy so much. I can't think of anyone I know who doesn't leap at the chance of "infecting" someone else with his/her own passionate love of modeming.

"I'll do something dumb...really mess up the BBS". Highly unlikely. Most BBS's have routines to take care of anything inappropriate that you might do. They are programmed to be "tough", since once in a while, rarely in my own experience as a SysOp and Co-SysOp (thankfully!) an individual will attempt to sabotage a BBS. Don't fear that you will cause damage and be to blame. The chances are almost nonexistent.

"I won't be able to read...fast enough..." This is a real possibility. That is why, in an earlier article, I suggested that, whatever the baud rate your modem is capable of, you "get on" the BBS at 300 baud the first few times until through practice your reading speed has increased and you are ready for higher baud rates. The fact is, however, that most BBS's will send you one or two screens of information at a time and will then sit there waiting for your input. If you can learn to skim quickly what is coming across, this can be a tremendous help. Also, try jotting down (use a helper to write, if necessary) the key presses that you will use one after another to get where you want to go on a BBS, then on subsequent visits, you can have the paper beside you and just read them as you go. It is a good idea to call only one or two BBS's at first and get really familiar with how they operate. Then when you access a hitherto unfamiliar BBS you will already have some savvy that will make your contact much easier, even if the "new" board's system of commands is a bit different. The fact is that most BBS's use software chosen from among four or five leading software programs for that computer. That's why I can, and do, call BBS's all across the country and find many similarities to local boards. Don't forget, either, what I said in Part two about sending the menu screen of a BBS to the printer on your first or second contact, so that all the commands needed are printed out and at your side. That helped me when I was beginning, and it probably will help you too.

"I won't remember...confused and frustrated." The solutions to this problem are already addressed by the suggestions I made in the preceding paragraph. Give them a try!

Avoiding some pitfalls: When downloading, I have run into some situations

that were at first puzzling and frustrating. Here is how I handled these situations.

You have told both your computer and the other person or the BBS the filename of the program you want to receive. You begin the transfer and almost at once get the message "Bad device name". Solutions: first, check to see that the drive door is closed. Did you tell your computer to send the program to the right drive (the one with the disk in it!)? Did you provide a disk with enough space to accommodate the program you are receiving? Is the disk positioned properly in the drive, meaning is the notch up if it is supposed to be, etc.?

You are in the middle of a file transfer when your computer beeps or chimes and you get the message "File Transfer Complete". You know it's not. What to do?

There can be a variety of reasons why this happens. One is line noise. You can go through the steps to exit from that BBS, then call right back, hoping for a clearer line. Or you can stay on and attempt the same transfer again. Before you do this, CHANGE THE FILENAME for your computer. (You will have to use the same filename when requesting it from the BBS). If you don't change the filename at your end, in case the file that came over in an incomplete manner is protected, you will get an error message and have to start over.

One way that I change the filename is to put a "2" at the end of it, if there is room. If not, I just misspell it. I can correct the filename spelling at a later date while using a disk manager. If you haven't succeeded on the second download try, you probably ought to try downloading something else. You should also leave a message to the SysOp. He/She will want to know if there is a problem with that file, so that others will not be likewise inconvenienced.

If you happen to have the version of Fast Term that uses the filenames MD and ME (a version that I believe was modified by J. Peter Hoddie), you can probably avert the problem described above--getting the message "File Transfer Complete" halfway through the transfer--by using FCTN-B to reduce the buffer size from the default of 64 to 32. Do this BEFORE starting the transfer process. I do not know of any way of doing this while using Telco or other versions of Fast Term. Also, when using Fast Term (any version), you will not be prompted to enter the filename for your own computer to use in sending the program received to disk. Remember to press FCTN-N and then enter the appropriate drive number and filename for EACH file you are downloading.

The three problems just dealt with appear to be the most common ones. I may add others in article four if I feel that you might encounter them often.

I hope this series is helping you. Please send me a letter, in care of the newsletter, if there are concerns or questions that you would like me to address. That's all for now. See you next time!

FUNNELWEB

You all know this word. It's that wonderful computing tool shared with us by the McGoverns in Australia.

Funnelweb

Do you know this word? Surprise - it's a spider, the funnelweb spider. It builds a flat sheet web among rocks and vegetation from which runs a tubular retreat, the whole resembling a very wide-mouthed funnel.

This little tidbit came as a result of reading a review of a new British mystery book. The author uses funnelweb spiders to do away with some people in his story. There seem to be many species of these spiders so I guess some of them would be poisonous.

I draw no conclusions about the name Funnelweb Farm from this. It's just that I was startled to turn a page in Publishers Weekly magazine and to see Funnelweb staring out at me.

Now I leave you with one more bit of trivia. Do you know what a virgule is?

D.S.Swartz

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 documentatiion, it will be supplied on disk.

My TI-PD library now consists of 400 disks of fairware (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(!), 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 #58.

```
29000 SUB CHARFIX(HX$()):: D
ISPLAY AT(12,1)ERASE ALL BEE
P:"Transliterate punctuation
?" :: ACCEPT AT(12,28)SIZE(1
)VALIDATE("YN"):Q$ :: IF Q$=
"N" THEN 29004
29007 CALL CHARVIEW(HX$())
29009 SUB CHARVIEW(HX$())
```

And call the routine by CALL CHARFIX(HX$()). These changes will avoid unwanted transliteration, and will make it possible to use CHARFIX for ASCII 24-31 and 144-159, if BXB has been merged in, as described in Tips #55.

The Spring 1990 issue of the TI*MES newsletter from England contaiined 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 -

```
100 A$=STR$(7):: Y=1
110 Y=Y+1 :: FOR J=LEN(A$)TO
 1 STEP -1 :: E=(VAL(SEG$(A$
,J,1))*7+X)/10
120 X=INT(E):: F=(E-X)*10 ::
 X$=STR$(F)&X$ :: NEXT J
130 IF X>0 THEN X$=STR$(X)&X
$
140 IF POS(X$,"777777",1)<>0
 THEN 160
150 A$=X$ :: X$="" :: X=0 ::
 GOTO 110
160 PRINT "7^";STR$(Y);"=";X
$
170 PRINT #2:"7^";STR$(Y);"=
";X$
```

The answer? 7^175=78011207
91220815810240464127911180777
77771881820069326361118396985
71603885844026671779915606471
69989331265664440734763224855
47164949399539125864379 43

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

Anyway, 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 C$(100)
110 DISPLAY AT(12,1)ERASE AL
L:"FIRST NUMBER?" :: ACCEPT
AT(14,1)VALIDATE(NUMERIC)BEE
P:A$
120 IF SEG$(A$,1,1)="-" THEN
 A$=SEG$(A$,2,255):: M=1
130 A=LEN(A$):: D1=POS(A$,".
",1):: IF D1>0 THEN A$=SEG$(
A$,1,D1-1)&SEG$(A$,D1+1,255)
:: D1=A-D1
140 DISPLAY AT(16,1)ERASE AL
L:"SECOND NUMBER?" :: ACCEPT
 AT(18,1)VALIDATE(NUMERIC)BE
EP:B$
150 IF SEG$(B$,1,1)="-" THEN
 B$=SEG$(B$,2,255):: M=M+1
160 Y=LEN(B$):: D2=POS(B$,".
",1):: IF D2<>0 THEN B$=SEG$
(B$,1,D2-1)&SEG$(B$,D2+1,255
):: D2=Y-D2 :: D1=D1+D2 :: Y
=Y-1
170 FOR J=Y TO 1 STEP -1 ::
W=W+1 :: B=VAL(SEG$(B$,J,1))
:: FOR K=LEN(A$)TO 1 STEP -1
 :: A=VAL(SEG$(A$,K,1))
180 D=(A*B+X)/10
190 E=INT(D):: F=(D-E)*10 ::
 C$(J)=STR$(F)&C$(J):: X=E :
: NEXT K
200 IF X>0 THEN C$(J)=STR$(X
)&C$(J)
210 C$(J)=C$(J)&RPT$("0",W-1
)
220 X=0 :: NEXT J
230 L=LEN(C$(1)):: FOR J=1 T
O Y :: L2=LEN(C$(J)):: IF L2
<L THEN C$(J)=RPT$("0",L-L2)
&C$(J)
240 NEXT J
250 FOR J=LEN(C$(1))TO 1 STE
P -1 :: FOR K=1 TO Y :: G=G+
VAL(SEG$(C$(K),J,1)):: NEXT
K
260 G=(G+H)/10 :: L=INT(G)::
 G=(G-L)*10 :: D$=STR$(G)&D$
 :: H=L :: G=0 :: NEXT J
270 IF H>0 THEN D$=STR$(H)&D
$
280 IF D1>0 THEN D$=SEG$(D$,
1,LEN(D$)-D1)&"."&SEG$(D$,LE
N(D$)-D1+1,255)
290 IF M=1 THEN D$="-"&D$
300 PRINT D$
```

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

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.

```
31111 SUB INVERSE(A,B):: FOR
 CH=A TO B :: CALL CHARPAT(C
H,CH$)
31112 FOR J=1 TO 16 :: CH2$=
CH2$&SEG$("FEDCBA9876543210"
,POS("0123456789ABCDEF",SEG$
(CH$,J,1),1),1):: NEXT J ::
CALL CHAR(CH,CH2$):: CH2$=""
 :: NEXT CH
31113 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 -
A$="DSK1.PROGRAM"
You can write lines before these, after these, and even RES the program. You can also use MOVE from GK UTILITY. You can do anything to the program you want 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(A$):: CAL
L LOAD(-41+Z,ASC(SEG$(A$,Z,1
)),0):: NEXT Z :: CALL LOAD(
-41,LEN(A$)):: CALL LOAD(-44
,4+LEN(A$))
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 tinygram -

```
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(CH,"FF000000000
000FF"):: NEXT CH
120 X=INT(RND*6+1)*2-1 :: Y=
INT(14*RND+1)*8+32 :: FOR R=
12-X TO 12-INT(RND*X):: CALL
 HCHAR(R,5,Y,R)
130 CALL HCHAR(25-R,5,Y,R)
140 CALL HCHAR(R,28-R,Y,R)
150 CALL HCHAR(25-R,28-R,Y,R
)
160 ON INT(2*RND+1)GOTO 170,
190
170 CALL HCHAR(R,4+R,Y+8,25-
R*2)
180 CALL HCHAR(25-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 No. 1300.1.

```
100 GOTO 140
110 J,K,ST,LV,I,R(),T,X,A,A$
,X$,B,B$,C,C$,D,D$,AY,BY,B@$
,BY$,CY,CY$,C@$,Q,Y(),Y@,X@(
),FLAG,R$,RL,Z,YY,D@(),Q$
120 CALL CLEAR :: CALL CHAR
:: CALL COLOR :: CALL VCHAR
:: CALL SCREEN :: CALL KEY :
: CALL SOUND
130 !@P-
140 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):" @$%#*#+#
RITHMATIK #+#%$@ "
160 DISPLAY AT(10,1):" Selec
t difficulty level -": :" Ty
pe 1 or 2"
170 CALL KEY(0,K,ST):: IF ST
<1 THEN 170
180 IF (K<49)+(K>50)THEN 170
190 LV=K-48
200 CALL VCHAR(1,3,32,672)::
 FOR I=1 TO 4 :: RANDOMIZE
210 R(I)=INT(RND*10):: IF R(
I)=0 THEN 210
220 FOR T=1 TO I-1 :: IF R(I
)=R(T)THEN 210
230 NEXT T
240 NEXT I :: X=R(1)*1000+R(
2)*100+R(3)*10+R(4)
250 A=INT(4*RND)+1
260 ON A GOSUB 330,340,350,3
60 :: A$=X$
270 B=INT(4*RND)+1 :: IF B=A
 THEN 270
280 IF (LV=1)*(LEN(STR$(R(B)
/R(A)-INT(R(B)/R(A))))>2)THE
N 250
290 ON B GOSUB 330,340,350,3
60 :: B$=X$
300 C=INT(4*RND)+1 :: IF C=A
 THEN 300
310 IF C=B THEN 300
320 ON C GOSUB 330,340,350,3
60 :: C$=X$ :: D=10-A-B-C ::
 ON D GOSUB 330,340,350,360
:: D$=X$ :: GOTO 370
330 X$=" 1st " :: RETURN
340 X$=" 2nd " :: RETURN
350 X$=" 3rd " :: RETURN
360 X$=" 4th " :: RETURN
370 AY=R(B)/R(A):: BY=ABS(R(
C)-R(B)^2):: IF BY=0 THEN 38
0 ELSE 390
380 B@$="" :: BY$=" equal to
" :: GOTO 400
390 B@$=STR$(BY):: BY$=" mor
e or less than"
400 CY=ABS(R(D)-R(C)-R(B)-R(
A)):: IF CY=0 THEN 410 ELSE
420
410 CY$=" equal to" :: C@$="
" :: GOTO 430
420 CY$=" more or less than"
 :: C@$=STR$(CY)
430 DISPLAY AT(2,1):" I have
 a 4-digit number ":" with n
o two digits the":" same." :
: DISPLAY AT(6,1):" The";B$;
"digit is";AY;" times the";A
$;"digit."
440 DISPLAY AT(9,1):" The";C
$;"digit is ";B@$;BY$;" the
square of the";B$;" digit."
:: DISPLAY AT(14,1):" The";D
$;"digit is ";C@$;" ";CY$;"
the sum of the other digits"
450 DISPLAY AT(18,1):" What
is the number?" :: ACCEPT AT
(20,2)VALIDATE(DIGIT)SIZE(4)
BEEP:Q :: IF Q=X THEN 530
460 Y(1)=INT(Q/1000):: Y(2)=
INT((Q-1000*Y(1))/100):: Y(3
)=INT((Q/100-INT(Q/100))*10)
:: Y(4)=(Q/10-INT(Q/10))*10
:: IF Y(B)<>INT(Y(A)*AY)THEN
 570
470 IF BY<>0 THEN 490
480 IF Y(C)<>Y(B)^2 THEN 570
 ELSE 500
490 IF (Y(C)<>Y(B)^2+BY)*(Y(
C)<>Y(B)^2-BY)THEN 570
500 IF CY<>0 THEN 520
510 IF Y(D)<>Y(A)+Y(B)+Y(C)T
HEN 570 ELSE 530
520 IF (Y(D)<>Y(A)+Y(B)+Y(C)
+CY)*(Y(D)<>Y(A)+Y(B)+Y(C)-C
Y)THEN 570
530 DISPLAY AT(22,1):" Corre
ct!": : :: FOR J=1 TO 2 :: C
ALL SOUND(100,392,5):: CALL
SOUND(100,440,5):: CALL SOUN
D(100,494,5):: CALL SOUND(10
0,523,5)
540 NEXT J :: CALL SOUND(100
0,523,5,392,5,330,5)
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(900,30000,3
0,30000,30,400,30,-4,0):: DI
SPLAY AT(23,1):" 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=65 THEN 450
600 IF K=90 THEN 610 ELSE 58
0
610 DISPLAY AT(22,1):" The n
umber was";X:" " :: GOTO 550
 :: END
```

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

Jim Peterson

Tigercub

MULTIPLAN

TUTORIAL 3.0 BY STEPHEN S. BAGSTAD
NORTHCOAST 99'ERS - JANUARY 26, 1991
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LATEST MULTIPLAN (MP) NEWS

THE NORTHCOAST GROUP HAS A PRETTY NEAT MP "PACKAGE" FOR DOING ONE'S TAXES THAT IS MENTIONED IN THIS AND LAST MONTHS' NEWSLETTERS. IT MAKES USE OF SOME PRETTY ADVANCED TECHNIQUES SUCH AS PRINTER CONTROL AND LINKING OF SPREADSHEETS. IF YOU'RE A GROUP MEMBER, TRY IT OUT! I JUST FINISHED READING THE "BOZO CHRONICLES" PUT TOGETHER BY A GARTH POTTS OF OKLAHOMA CITY. HE MAKES A GOOD RECOMMENDATION THAT MP BE CONSIDERED FOR USE AS WHAT HE CALLED AN EASY COLUMNAR WORD PROCESSOR. WHY IT INSTEAD OF TI-WRITER/FUNNELWEB? I QUOTE "SIMPLE; MP'S COLUMNAR LAYOUT IS PERFECT FOR SIMPLE BREAKDOWN OF (SAMPLE) PLAYERS, POSTITIONS, TEAM NAMES, ETC. PLUS, IF I EVER WANTED TO ADD ANY CALCULATIONS, THERE'S NO CONTEST."

FIRST EXAMPLE (FINAL)

START UP THE PROGRAM AGAIN, RELOADING THE FILE OF OUR ELECTRIC BILLS THAT WE HAVE NAMED "UTILITY". AT THE END OF THIS SESSION, WE WILL HAVE A FULL YEAR OF INFORMATION THAT YOU CAN USE AS A PATTERN TO KNOW MORE ABOUT THE MONEY YOU ARE SPENDING. THE SCREEN SHOULD LOOK LIKE THE ONE AT THE END OF THE LAST ARTICLE, WITH THE MONTHS JULY THROUGH NOVEMBER SHOWN. LET'S ADD SPACE FOR THE REST OF THE MONTHS. MOVE TO R2C1 ("JUL") AND HIT "I" FOR INSERT. SELECT "ROWS", THEN "6" TO MAKE ROOM FOR SIX MORE ROWS (JAN-JUN). YOU SHOULD BE IN THE NEW R1C2, SO ENTER "JAN" AND SO ON, ENTERING THE MONTHS PRECEEDING JUL. TO ADD THE FINAL MONTH, SINCE WE LAST TIME ONLY WENT THROUGH NOV, WE COULD NORMALLY JUST GO TO THE ROW BELOW NOV AND PROCEED; HOWEVER, SINCE WE ASKED MP TO TOTAL THE COST IN C5, WE CAN KEEP THIS TOTAL BY INSERTING A SINGLE NEW ROW BETWEEN NOV AND THE ROW WITH OUR TOTAL. DO THAT, ENTERING DEC IN C1 OF THE NEW ROW.

NOW LET'S ENTER IN THE REST OF THE DATA. JAN: 970 KWH, 35 DAYS, $95.86; FEB: 690, 29,74.03; MAR: 730, 32, 78.40; APR: 620, 29, 67.04; MAY: 618, 31, 67.23; JUN: 657, 31, 84.36; AND DEC: 666, 29, 72.53. REMEMBER AS YOU ENTER THESE, TIME WILL BE SAVED IF YOU ARROW KEY AROUND THE WORKSHEET.

WHEN I FINISHED THIS, MY C2 WAS MIXED FORMAT, WITH SOME KWH ENTRIES CENTERED AND SOME DEFAULT (RIGHT SIDE). FORMAT ALL THESE VALUES TO DEFAULT. NOW LET'S TRY A NEW ITEM, MOVING TO R2C2, THE FIRST KWH ENTRY, AND HIT "N" FOR NAMES. TYPE "KWH" FOR THE NAME, AND ":" AND ARROW KEY TO R13C2 AND HIT ENTER. THIS ASSOCIATES THE NAME "KWH" WITH THOSE VALUES. DO THE CORRESPONDING NAMES FOR DAYS AND COST, NOTING THAT MP REMEMBERS YOUR REFERENCE AND WILL SUPPLY THE CORRECT "REFER TO..." FOR SUBSEQUENT ENTRIES- NOT BAD? TO SEE WHAT THIS DOES FOR US, GO TO THE BOTTOM OF EACH OF THESE IN TURN, AND REQUEST THE VALUE (FORMULA) SUM(NAME) (SO FOR KWH, GO TO R14C2, HIT "=", TYPE SUM(KWH) AND YOU WILL SEE 8452 THERE, AND SO ON). THE USE OF NAMES SIMPLY MAKES THE FORMULAS, ETC. MORE READABLE, AS YOU COULD GET THE SAME RESULT BY USING ALL RxCx NOTATION.

TO FINISH OUR CALCULATED COLUMNS, GO TO R3C4 AND COPY FROM THAT CELL TO R2C4. THEN IN R2C4, COPY DOWN 13 CELLS. DO THE SAME WITH C6. SO THAT WE KNOW WHAT WE HAVE, ENTER "TOTAL" IN R14C1, AND "AVG" IN R15C1. IN THE MISSING R15 CELLS, ENTER THE AVERAGE KWH, DAYS, AND COST USING THE AVERAGE(KWH,ETC) FORMULA.

FOR FINAL TOUCHES, I DECIDED TO FORMAT AVERAGE KWH AND DAYS TO FIXED, 1 DECIMAL, SHORTEN C2,C4,AND C6 TO 6 WIDTH, AND C5 TO 8 WIDTH. I ALSO ADDED, USING EDIT MODE, AN ASTERISK (*) AFTER JUN-SEP SINCE THOSE ARE HIGHER RATE SUMMER MONTHS; DO THIS BY MOVING TO THOSE CELLLS, HIT "E", FN-4, "*", AND ENTER. FINALLY, I INSERTED ROWS TO OFFSET THE MONTHLY VALUES FROM THE TITLES AND TOTALS/AVERAGES, ENTERING A LONG STRING OF "=" SIGNS IN THE FIRST COLUMN OF EACH NEW ROW, FORMATTING THOSE ENTIRE ROWS TO "CONT" TO RUN THE CHARACTERS ACROSS THE SCREEN. YOU SHOULD END UP WITH:

MONTH	KWH	DAYS	KWH/D	COST	C/KWH
JAN	970	35	28	$95.86	9.9
FEB	690	29	24	$74.03	10.7
MAR	730	32	23	$78.40	10.7
APR	620	29	21	$67.04	10.8
MAY	618	31	20	$67.23	10.9
JUN*	657	31	21	$84.36	12.8
JUL*	898	30	30	$114.17	12.7
AUG*	684	30	23	$87.70	12.8
SEP*	781	32	24	$100.09	12.8
OCT	548	28	20	$60.21	11.0
NOV	590	29	20	$64.60	10.9
DEC	666	29	23	$72.53	10.9
TOTAL	8452	365	23	$966.22	11.4
AVG	704.3	30.4	23	$80.52	11.4

HOPEFULLY THIS KIND OF ANALYSIS CAN HELP YOU WITH MAKING CHOICES ABOUT YOUR UTILITY USE. IT'S A LOT OF INFORMATION, RELATIVELY EASILY OBTAINED AND ORGANIZED, THAT YOU DON'T NECESSARILY GET FROM YOUR UTILITY COMPANY. UNTIL NEXT TIME!