

Subj:.. Virus Attack source  
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From: (Vern Jensen)

I sent the Virus Attack source out today. I also included the final version so you can see how it looks compiled, and I included the Snake source code from my c99 article #9, so you don't have to spend all year typing it in.

The Virus Attack source comes on two disks - a "source" disk and an "object" disk. That's because the game is so large that the source code, compiler output, and assembler output would not all fit on the same disk. So I save the compiled output to the source disk, then the assembler output to the object disk.

I stretched the limits of the TI and c99 with Virus Attack - the thing just barely loads into memory. You can't even use the CLOADER to load the object files, since the tiny bit of memory CLOADER takes up makes it so there isn't enough for everything else to load. So here are some complete instructions on how to compile Virus Attack. Sorry they're so detailed; I wrote them a long time ago, and it's just easier to use what I wrote earlier than to try to rewrite it. This assumes you have two DSSD disk drives:

Put the c99 Compiler/Funnelweb Disk in drive 1, and the Virus Attack Source Disk in drive 2 and start up the c99 Compiler. It will ask you several questions. Type 3N2 (NO) for the first two (3Include C Source?2 and 3Inline Push Code?), but type Y (Yes) for the last one (3Assume Long Jump?2). If you mess up, just reset your computer and start over. For 3Input Filename?2 type 3DSK2.MAIN/C2, and for 3Output Filename?2 type 3DSK2.GAME/S2. Make sure that the Virus Attack source disk is in drive 2. It will take around 10 minutes to compile. (Just imagine - every time I found a bug, I had to wait 10 minutes for it to compile and another 10 minutes to assemble before I could see if I fixed the bug, and often my 3fix2 didn't work, so I had to try it again!)

Once the compiler is finished, it will ask 3Re-run c99 Compiler?2. Type N for no. It will then return to the Funnelweb environment. Just make sure your c99 Compiler disk is still in drive 1, since that's where Funnelweb is. Once you get back to Funnelweb, choose option 2 for the Assembler. If you don't see this option, then you're on the wrong menu - hit the space bar to toggle to the other menu.

Once the Assembler is loaded, remove the c99 Compiler disk from drive 1, and put the Virus Attack Object Disk in its place. Then enter the following:

Source File Name:..DSK2.GAME/S  
Object File Name:..DSK1.GAME/O

Leave 3List Device Name?2 and 3Options?2 just the way they are, with nothing for 3List Device Name2 and 3RC2 for 3Options2. If you want, you could remove the R from the RC by hitting FCTN-1, but it is not necessary. Once again, it will take about 10 minutes to assemble.

When it is done, reset your computer and switch to the Editor/Assembler cartridge. You can NOT use the Editor/Assembler simulator provided by Funnelweb, because Virus Attack is so big that it needs ALL the memory it can get, and loading the Editor/Assembler simulator will take up just enough that Virus Attack will not load. Anyway, using the cartridge version of E/A, select Option 3 - 3Load and Run2. Type the following, pressing enter after each line. If you mess up, reset your computer and start over.

DSK1.C99PFG  
DSK1.GAME/O

```
DSK1.SND;O
DSK1.CSUP
DSK1.GRF1
DSK1.PUTNUM/O
DSK1.KEYJOY/O
DSK1.UTILS/O
DSK1.OP5SV/O
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This will load the Virus Attack source code and all the libraries it needs. Once this is finished, press enter a second time to get to the prompt for the program name. Type 3SAVIT2 and press enter. The screen will turn green and some files called 3VAT12, 3VAT22, 3VAT32, and 3VAT42 will be placed on disk 1, which is your Virus Attack object disk. No text will be displayed to tell you that it is saving the files, since the code to display that text would take up more memory, and Virus Attack needs all the memory it can get. If you get an error message instead of the screen turning green, then you most likely had a typo in one of the filenames, or maybe forgot one of them. Just reset the computer and start over. Congratulations; you've just compiled Virus Attack!

Maybe now you can understand why I love just selecting "Run" on my Mac to compile stuff. :-)

As for the source, it is split into several files since the source would otherwise be too long to load into FunnelWeb. The files are MAIN/C, GAME1/C, GAME2/C, and GAME3/C. MAIN/C simply #includes the other files. Not a standard use for #include, but it was necessary in this case.

Hope you enjoy looking at the code!

-Vern

HELP BASIC LISTING:

```
100 GOTO 190! GOTO HELP
110 CALL CLEAR :: RESTORE :: DISPLAY AT(1,3):"V I R U S   A T T A C K !"
120 DISPLAY AT(10,1):"1 - PLAY THE GAME" :: DISPLAY AT(13,1):"2 - INSTRUCTIONS"
130 DISPLAY AT(21,3):"YOUR CHOICE? 1" :: ACCEPT AT(21,16)BEEPVALIDATE("12")SIZE(-
1):CHOICE
140 ON CHOICE GOTO 150,160
150 DISPLAY AT(12,10)ERASE ALL:"LOADING..." :: RUN "DSK1.VIRUSLOAD"
160 !*****!
170 ! HELP !
180 !*****!
190 CALL CLEAR :: ROW=2
200 READ S$ :: IF S$="(END OF PAGE)" THEN 250 ELSE IF S$="END" THEN 270
210 ROW=ROW+1 :: IF S$="" THEN 200 ELSE DISPLAY AT(ROW-1,1):S$ :: CALL SOUND(-
30,523,3) :: IF ROW>23 THEN 250 ELSE 200
220 !*****!
230 ! END OF PAGE !
240 !*****!
250 DISPLAY AT(24,1):"-PRESS ANY KEY TO CONTINUE-" :: CALL SOUND(100,659,3)
260 CALL KEY(0,K,S) :: IF S<1 THEN 260 ELSE 190
270 DISPLAY AT(24,1):" - PRESS ANY KEY TO EXIT - " :: CALL SOUND(100,1000,3)
280 CALL KEY(0,K,S) :: IF S<1 THEN 280 ELSE 110
290 !
300 !*****!
310 ! DATA !
320 !*****!
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330 !
340 DATA " FOR THE FIRST TIME IN","HISTORY, THE TI HAS BEEN","INFECTED WITH
VIRUSES! IT IS"
350 DATA "UP TO YOU TO SAVE YOUR","COMPUTER!",""
360 DATA " YOU ARE ARMED WITH SPECIAL","CAPSULES THAT HAVE BEEN","CHARGED WITH
VERY HIGH","VOLTAGES, SO WHEN YOU GET"
370 DATA "FOUR OR MORE COLORS OF THE","SAME TYPE IN A ROW, THE ROW","WILL EXPLODE,
TAKING ANY"
380 DATA "VIRUSES IN THE ROW WITH IT!","BUT ACT QUICKLY, FOR IF THE","CAPSULES
STACK UP TO THE TOP"
390 DATA "OF THE SCREEN, THE VIRUSES","WILL MULTIPLY, AND THE TI","WILL BE INFECTED
FOREVER!","YOU ARE OUR ONLY HOPE...","(END OF PAGE)"
400 !
410 DATA " ROWS MAY BE CONNECTED","HORIZONTALLY OR VERTICALLY.","IF YOU HAVE MORE
THAN FOUR","COLORS OF THE SAME TYPE IN A"
420 DATA "ROW, THEY WILL ALL","DISAPPEAR, ALTHOUGH YOU","WON'T GET ANY EXTRA
POINTS","FOR THEM. ","",""
430 DATA "CONTROLS:","",""," YOU MAY USE EITHER THE","JOYSTICKS OR THE KEYBOARD
TO","MOVE THE CAPSULES.","SEE NEXT PAGE FOR DETAILS."
440 !
450 DATA "(END OF PAGE)","KEYS:","","S - LEFT","","F - RIGHT","","X - DROP","","D -
ROTATE CLOCKWISE","","E - ROTATE COUNTERCLOCKWISE","",""
460 DATA "JOYSTICK:",""," LEFT AND RIGHT MOVE THE","CAPSULE, AND PUSHING
DOWN","DROPS IT. THE BUTTON ROTATES","CLOCKWISE, AND PUSHING UP"
470 DATA "ROTATES COUNTERCLOCKWISE. ","(END OF PAGE)"
480 DATA "OTHER CONTROLS:","","","TO SELECT THE LEVEL OR SPEED","IN THE BEGINNING
OF THE","GAME, PUSH UP OR DOWN. AT"
490 DATA "ANY TIME DURING THE GAME YOU","MAY PUSH:","","","9 - RETURN TO TITLE
SCREEN","","P - PAUSE GAME","(END OF PAGE)"
500 !
510 DATA "SCORING:",""," FOR EVERY TWO ROWS YOU","DROP A CAPSULE BY
PUSHING","DOWN, YOU GAIN ONE POINT. ",""
520 DATA " EACH VIRUS DESTROYED IS","WORTH 15 POINTS. IF YOU","DESTROY MORE THAN
ONE VIRUS","IN A SINGLE TURN, YOU GET"
530 DATA "THEIR VALUE MULTIPLIED BY","THE NUMBER KILLED IN THAT","TURN:","","1
VIRUS = 15 POINTS"
540 DATA "2 VIRUSES = 60 POINTS","3 VIRUSES = 135 POINTS","4 VIRUSES = 240
POINTS","","(END OF PAGE)"
550 DATA "IN ADDITION, THERE IS A 100","POINT BONUS AT THE END OF","EACH
LEVEL. ","",""
560 DATA "WINNING:","","","THERE ARE THREE WAYS TO WIN. ","","1) BEAT LEVEL 10 ON
THE FAST","SPEED. ",""
570 DATA "2) BEAT LEVEL 20 ON ANY","SPEED. ","","3) EARN 30,000 POINTS",""," IF YOU
WIN, YOU GET TO","HEAR SOME REALLY COOL MUSIC!"
580 DATA "(END OF PAGE)"
590 !
600 DATA "TIPS:","","- REMEMBER THAT THE OBJECT","OF THE GAME IS TO KILL
THE","VIRUSES. AS SOON AS A LEVEL"
610 DATA "IS CLEARED OF VIRUSES, YOU","WILL GO ON TO THE NEXT. SO","DON'T WORRY
ABOUT GETTING","RID OF OLD CAPSULES THAT ARE"
620 DATA "LAYING AROUND. GO FOR THE","VIRUSES!","","- THE GAME SPEEDS UP
OVER","TIME, SO DON'T MESS AROUND!"
630 DATA ","","- TO "FLIP" A CAPSULE, SO","THE COLORS SWITCH SIDES","SIMPLY ROTATE
IT TWICE. ",""
640 DATA "- IF UP ON THE JOYSTICK DOES","NOT WORK, RELEASE ALPHA LOCK","(END OF
PAGE)"
650 !
660 DATA ","",""-----","",""," I HOPE YOU ENJOY
VIRUS","ATTACK. I SPENT NEARLY TWO","YEARS MAKING IT, FINISHING"

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670 DATA "IN NOVEMBER, 1995.", "", ""  
680 DATA " PLEASE WRITE AND TELL ME", "WHAT YOU THINK OF THE GAME.", "AND DON'T  
FORGET TO SEND THE", "\$15! AS A REGISTERED USER,"  
690 DATA "YOU WILL BE INFORMED WHEN I", "RELEASE ANY NEW GAMES. YOU", "SURE WON'T  
WANT TO MISS THE", "NEXT ONE! IT WILL BLOW AWAY"  
700 DATA "ANY OTHER GAME YOU'VE SEEN!", "(END OF PAGE)", "", "", "ALSO, IF YOU HAVEN'T  
SEEN MY", "OTHER TWO GAMES, MAZE MANIA"  
710 DATA "AND THE CASTLE, YOU MIGHT", "WANT TO TAKE A LOOK AT THEM.", "THEY ARE  
WRITTEN IN EXTENDED", "BASIC, BUT ARE PROBABLY THE"  
720 DATA "BEST XB GAMES YOU'LL EVER", "SEE! SO PLEASE WRITE, AND", "HELP SUPPORT THE  
TI!", "", ""  
730 DATA " YOU CAN REACH ME AT:", "", "VERN L. JENSEN", "910 LINDA VISTA  
AVE", "PASADENA, CA 91103", "", "I LOOK FORWARD TO HEARING"  
740 DATA "FROM YOU! NOW, ON WITH THE", "GAME!"  
750 DATA "END"