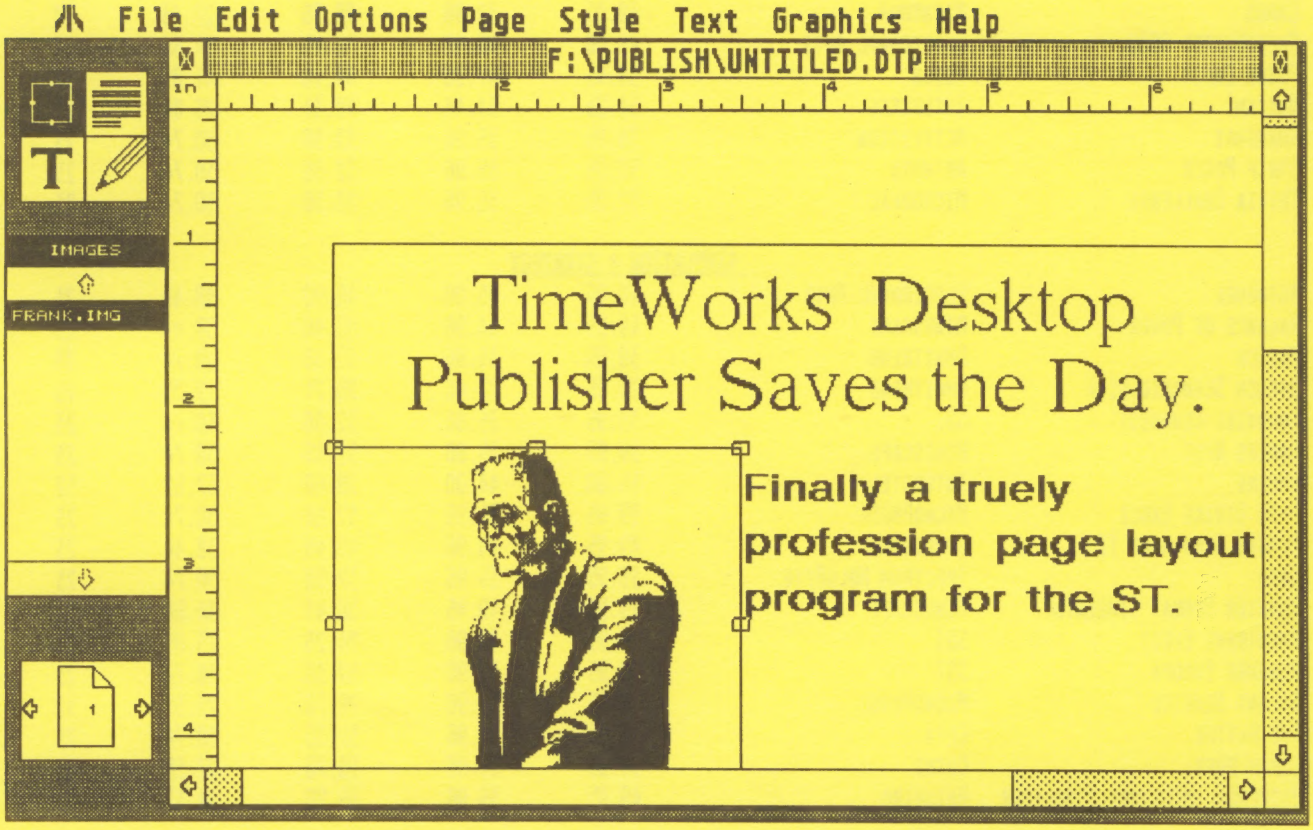
DAL-ACE

VOLUME 9, ISSUE 6 JUNE, 1988



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Dal-Ace Meeting Minutes

MAY 14, 1988

By Anita Uhl, Secretary

Board Meeting

Officers present: Rachel Duke, Donny Arnold, Michael Duke, Rene Tucker, Anita Uhl, Dave Gramm, Nolan Terrill. Also attending: Brenda Arnold, Angela Burns, Ray Burns.

Joe Camblin resigned as ST Librarian.

Due to delays, the May newsletter has not yet gone to the printer and will not be available until after the main meeting.

Angela Burns gave a report requesting a change of software for the newsletter to Timeworks Desktop Publishing. Motion was passed to purchase Timeworks Desktop Publishing. A motion was made and passed that Angela represent Dal-Ace to work a deal with the vendor either by cash / or cash and trade-in of Publishing Partner / or advertising / or all advertising. The reported cost of Timeworks is $99.

Rachel Duke resigned as VP Communications.

Brenda Arnold will be the 8-Bit Disk Librarian and the Kiosk Manager. Ray Burns volunteered to be the Advertising Manager. Anita Uhl will handle the Start-Up kits. Michael Duke will handle mail box pick-up and laser printing for the newsletter.

Meeting adjourned.

Main Meeting

John Winer volunteered to be the ST Disk Librarian.

Terry Borchardt was elected as VP Communications.

ANNOUNCEMENT

We are now using Timeworks Desktop Publisher ST for newsletter production. It is state-of-the-art for the ST right now; the best there is - so I hope to be able to give you a truly outstanding newsletter with it.

THERE'S ALWAYS A BUT...

However, I have only just begun to learn to use DTP, so I may not be getting it just right on my first try. Just be nice and bear with me, and I'll try, with your help, to make Dal-Ace THE name among newsletters.

Smart REMarks

By Angela Burns

Well, we had quite a meeting this time around! For various reasons, we had to accept the resignations of our Vice President of Communications, Advertising Manager, *and* both the 8-Bit and ST Disk Librarians. Rachel, Jim, Billy, and Joe: I'm certain that the entire club joins me as I express my regret that you are stepping down from your positions. You have all done wonderful jobs. The good news is that we were lucky enough to get volunteers right away *for all four jobs!* In addition, we got volunteers for laser printing the newsletter, picking up the clubs mail, handling the Start-Up Kits, and kiosk Manager! It was a veritable *frenzy* of volunteering; I've never seen anything like it.

Unfortunately, it seems that you were all frenzied out by the time you got home and thought (or didn't think) about uploading articles for the newsletter. Really, now - only *three submissions?* You know, just because the deadline is noon of the day following the meeting doesn't mean you're not allowed to write anything until Saturday night! Your submissions will be gratefully accepted *any time*; just upload them to file area 19 of the BBS and leave me a message on the newsletter SIG to let me know it's there and what the filename is. Or mail them to me. Or bring them to the meeting on disk or paper.

OR SOMETHING!!!

I have downloaded some ST picture files from the BBS and will be putting them in the newsletter as examples of the great stuff that is available there. If someone prints out some 8-bit graphics (or figures out how to transfer them to the ST, if such a thing is possible), I will be happy to use them as well.

That's about all for this month. See you in June!

Wanna Be a Star?

Member-At-Large Nolan Terrill is, as you know, making an instructional video for Dal-Ace, with the help of Dave Gramm and his company, the Harris Corp. (They are kindly allowing us the use of their equipment to edit the video.)

You, too, can be the star of your own Dal-Ace videotape! If you would like to produce a little class to teach others how to use a certain program or how to perform some other sort of digital magic, just contact Nolan. He will come to your home with his video things and help you to produce a drop-dead instructional video of your own to be included in the Dal-Ace Video Library.

If there is enough interest, we can build quite a little library! Let's prove how innovative we can be!

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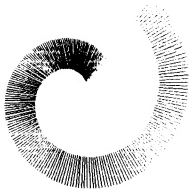

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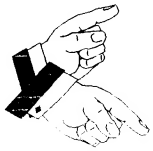

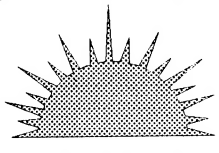

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Turbo BASIC III

An 8-bit tutorial by Eb Foerster

This month, we will start examining some of the individual commands of Turbo Basic. We will try to present some ideas on how to use the commands along with some illustrative examples.

The documentation describes the "TEXT x,y,a$" command as "bit-blocks text in a$ at x,y". What does that mean? In plain English, this means that you can print text to a graphics screen. If you look real close at the characters on one of the text mode screens, you will notice that each character consists of an 8*8 block of dots. Actually, most characters are limited to a block of 6*6 dots since the outer layer of dots are left blank to allow for space between characters. These dots are transferred to the screen with each dot being displayed as one pixel of the current graphics mode. Try this to print a sample in each of the graphics modes:

```
10 COLOR 1
20 FOR A=3 TO 15:IF A=9 THEN A=14
30 GRAPHICS A:PRINT "GRAPHICS ";A
40 TEXT 0,0,"1234567890"
50 GET KEY:REM MUST PRESS ANY KEY TO
    CONTINUE
60 NEXT A
```

The results are summarized in the following table:

GRAPHICS	CHARACTER
3	Quadruple GR. 2 characters
4	Double GR. 2 characters
5	Double GR. 2 characters
6	GR. 2 characters
7	GR. 2 characters
8	GR. 0 characters
14	GR. 1 characters
15	GR. 1 characters

The text command may be used with text modes but are not very useful because the 8 times normal size of each character limits the information that can be displayed. In graphics mode 0 you are limited to two lines of five characters each. Here is an example:

```
100 CLS
110 DIM A$(5),B$(5)
120 A$="TURBO"
130 B$="BASIC"
140 FOR A=1 TO 5
150 COLOR ASC(A$(A))
160 TEXT (A-1)*8,(A-1)*1,A$(A,A)
170 COLOR ASC(B$(A))
180 TEXT (A-1)*8,10+(A-1)*1,B$(A,A)
190 NEXT A
200 GOTO 200
```

Notice that letters may be offset vertically from each other as they are in the display from the above program. Furthermore, in the text modes, the color statement defines the character that will be used for plotting each pixel. In the example above, the color is set to the ASCII value of each character before the TEXT command is issued for that character. Thus each character will be displayed as a set of pixels composed of its own character.

The full power of the TEXT statement becomes evident with the graphics modes. In games for example, it is easy to display prompts and scores in the middle of graphics. Normally, this is accomplished by changing the display list and inserting a text mode line into the graphics screen. Here is an example in Graphics 7 mode:

```
100 DIM A(2,2),P$(1)
110 DO
120 GRAPHICS 23:COLOR 1
130 RESTORE :FOR A=1 TO 4:READ B,C,D,E
140 PLOT B,C:DRAWTO D,E
150 NEXT A
160 DATA 75, 24, 75, 57, 86, 24, 86, 57, 64, 35,
    97, 35 ,64,46,97,46
170 FOR X=0 TO 2:FOR Y=0 TO 2:A(X,Y)=0:
    NEXT Y:NEXT X
180 X=1:Y=1:X1=1:X1=1
190 PLY=0:CHR=88
200 EXEC CURSOR
210 TEXT 20,5,"NEXT TURN: "
220 TEXT 5,80,"START: NEW GAME"
230 DO
240 T=STRIG(PLY):S=STICK(PLY)
250 X=X+(S=7)*(X<2)-(S=11)*(X>0)
260 Y=Y+(S=13)*(Y<2)-(S=14)*(Y>0)
270 IF X<>X1 OR Y<>Y1 THEN EXEC
  CURSOR:X1=X:Y1=Y
280 IF NOT T AND NOT A(X,Y)
290 A(X,Y)=1
300 TEXT 66+X*11,26+Y*11,CHR$(CHR)
310 IF PLY=0:PLY=1:CHR=79:ELSE :PLY=0:
    CHR=88:ENDIF
320 ENDIF
330 TEXT 110,5,CHR$(CHR)
340 IF PEEK(53279)=6 THEN EXIT
350 LOOP
360 LOOP
370 PROC CURSOR
380 X2=65+11*X1:Y2=25+11*Y1:COLOR 0:
    EXEC DRAW
390 X2=65+11*X:Y2=25+11*Y:COLOR 1: EXEC
    DRAW
```

```
400 ENDPROC
410 PROC DRAW
420 PLOT X2,Y2:DRAWTO X2+9,Y2:DRAWTO
  X2+9,Y2+9:DRAWTO X2,Y2+9:DRAWTO
      X2,Y2
430 ENDPROC
```

This program is a simple Tic-Tac-Toe game for two players to play against each other. Use joysticks 1 & 2 to move the cursor and press the button to place X's and O's.

Here is another example of combining graphics and text, but this time in Graphics 8 mode:

```
10 DIM A$(20)
20 XMAX=9:YMAX=7
30 CLS
40 XRANGE=0
50 INPUT "ENTER COEFFICIENTS C AND M
    FOR EQUATION Y=C+MX";C,M
60 IF C>=0
70 X1=0:Y1=C
80 IF Y1>YMAX
90 Y1=YMAX:X1=(Y1-C)/M
100 IF X1<0 OR X1>XMAX THEN XRANGE=1
110 ENDIF
120 ELSE
130 Y1=0:X1=-C/M
140 IF X1<0 OR X1>XMAX THEN XRANGE=1
150 ENDIF
160 Y2=C+M*XMAX
170 IF Y2<=YMAX
180 IF Y2>=0
190 X2=XMAX
200 ELSE
210 Y2=0:X2=-C/M
220 ENDIF
230 ELSE
240 Y2=YMAX:X2=(Y2-C)/M
250 IF X2>XMAX THEN XRANGE=1
260 ENDIF
270 GRAPHICS 24:COLOR 1
280 PLOT 40,0:DRAWTO 40,150:DRAWTO
    319,150
290 FOR A=10 TO 150 STEP 20:PLOT
    40,A:DRAWTO 45,A:TEXT 20,A-
    4,CHR$(55-A/20):NEXT A
300 FOR A=40 TO 330 STEP 30:PLOT
    A,150:DRAWTO A,145:TEXT A-
    4,160,CHR$(47+(A-4)/30):NEXT A
310 IF XRANGE THEN TEXT 50,100,"OUT OF
    RANGE":GOTO 370
320 PLOT 40+X1*30,150-Y1*20
330 DRAWTO 40+X2*30,150-Y2*20
340 A$="Y=":A$(LEN(A$)+1)=STR$(C):IF
    M>=0 THEN A$(LEN(A$)+1)="+"
350 A$(LEN(A$)+1) = STR$(M): A$(LEN(A$)+1)
    ="X"
360 TEXT 125,80,A$
370 GOTO 30
```

This program will plot a straight line for the equation y=c+mx. You are prompted to enter the coefficient c (y-intercept) and slope m. The curve will be drawn and the x and y coordinate values and the equation will be printed using the text command. Your son or daughter taking beginning Algebra might appreciate this program.

Answer to last month's programming problem:

```
10 INPUT "ENTER NUMBER OF TEAMS?
    ";TEAMS
20 PRINT "THE NUMBER OF GAMES=
    ";TEAMS-1
```

The answer to the version of the problem for more experienced programmers is identical to the one above. In a single elimination tournament, each game produces one loser. Since all but one team loses a game, there will be TEAMS-1 games played.

If you solved the problem as in the example, congratulations. Don't despair if you used many more lines of code to arrive at the answer. The first time this problem was presented to me, I calculated the number of games by summing the games played in each round. As a matter of fact, computers (programs) are good at performing this type of calculation by repetitive looping through a set of instructions. The point I am trying to make is that no matter how you code your program, there are only two kinds of programs - those that work and those that don't. Actually I should add a third type - a program that works perfectly today but contains a bug that someone will discover tomorrow. My programs seem to fit the latter category.

One facet of program writing that has no effect on whether a program works correctly or not is the style in which it is written. A program may be written for compactness of code, speed of execution, or for clarity in reading code. The last factor can, however, be very useful when it comes time to debugging a program. For example, you have a choice of using a letter or a descriptive word for a variable or constant. For a person not familiar with a program, the descriptive word will be more useful. You may even appreciate it if you want to modify the program at a later time. I can attest to the fact that I was unable to decipher my own program a few weeks after writing it. Here are two examples. Which would you like others to write:

```
10 A=PEEK(53279)
20 IF A=3 THEN GOTO 1000
```

or:

```
10 CONSOLE=53279
20 START=6: SELECT=5: OPTION=3
30 KEY=PEEK(CONSOLE)
40 IF KEY=START THEN GOTO 1000
```

I know which program you would like others to write; but you can do yourself a favor if you use the same procedure in your own programs. The extra time it takes to write clear code or add a few REMark statements is time well spent.

Turbo BASIC has a couple of features that I would encourage you to use because they enhance the ability to decipher programs. Use a named procedure whenever possible. For example, the command EXEC INITIALIZE is much easier to decipher than a nondescript GOSUB 10000. You immediately know what the named PROCedure does and if you want to examine its code. However, the GOSUB code will have to be examined unless a REM statement was included indicating the purpose of the GOSUB statement.

The line indent option for listing program lines is a neat printer to compressed mode (138 characters/line) and list your program to the printer - LIST "P:". In compressed mode, even those lines that occupy three physical lines on the TV monitor will appear as a single line on the printed listing. You can now see the structure of a program quite easily as the contents of PROCedures, loops, and IF-ELSE-ENDIF statements are indented from the remainder of the code. If for example, you leave out one ENDIF in multiple nested IF-ELSE-ENDIF statements, the error will become quite obvious just by looking at the listing.

Programming tip: Logical expressions.

Look at lines 250 and 260 of the Tic-Tac-Toe listing above. You will find terms such as (S=7) and (X<2). These expressions are called logical expressions because the term within the parentheses evaluates to either a true or false value. In Atari BASIC, the true expression receives a value of 1 and the false expression receives a value of 0. Expressions containing logical expressions can sometimes replace several IF statements. Line 250 for example, increments the value of X if the joystick is pushed to the right (S=7) and if the current value of X is less than 2 (X<2) and similarly decrements X if the joystick is pushed to the left (X=11) and X is greater than 0¢(X>0). This produces compact code but also goes against the advice I gave above for writing clear code.

Well, it's time to close and leave you with another problem. In the listing for the Tic-Tac-Toe game, the variable PLY is toggled between 0 and 1 and the variable CHR is toggled between 79 and 88 in line 310. Find a way to perform this toggle by replacing the IF statement with an arithmetic expression.

The Atari XF-551

A Programmer's View

By Robert Puff

Reprinted from The Acorn Kernel, 5/88

Atari's new ***XF-551*** certainly has been quite a surprise to many. I have seen many comments concerning it and thought I would offer some of mine as well.

The drive is just about the same size as the 1050 but not quite as high. It uses a generic-type double-sided direct drive mechanism which is nice and quiet compared to some 1050's I've heard. The drive uses the standard 9VAC power supplies used for the other 1050 and 810 drives. The back of the drive does get nice and hot, just like the 1050's, but that did not affect the drive's operation when I left it running for a month solid.

The drive runs a little faster (300 RPM compared to the standard 288), but Atari adjusted for it by clocking the controller a little faster. So there is still the same amount of data in the same format on the disk.

Now we get into compatibility. Atari has done a fair job at making the drive compatible with the 810 and 1050. There is only one flaw I found. The missing sector bit in the status byte does not reflect a missing sector correctly. This should have been simple enough to do, but they did not. Because of this, there *are* protected disks that will not load on an ***XF-551***. I do not have the titles with me at the moment, but any program that looks for a missing sector status will probably not work.

The next subject is double density. Finaly, Atari has come out with a true double density drive, which will read other double density disks. However, there are some problems here also. To determine the density of a disk, normally you read sector 1 and then issue a status request. One of the status bytes will then tell you the density. This works fine for the ***XF-551*** when it is in single or enhanced density but not always for double. Instead, double density comes back with a status of enhanced. Once you use the set density commands, the drive may be set to double, and the status will be correct. Just don't go back into single, or you'll have to manually set the density again. To summarize: if you use single and double density disks, the drive will have a very hard time going into double. Since SpartaDOS has no way of forcing densities, this can be a real problem. The only way I've ever seen it do it automatically is when booting a double density disk. (Note: I did figure out a way to make the drive reconfigure: it is used in *Diskcomm 3.2*).)

The drive is capable of double-sided operation, giving you a possible 360K storage when using double density. (Of course, you must use *MYDOS* or *SpartaDOS* because the DOS 2.5 it comes with supports none of this.) I found it strange that it will not use double-sided operation in single or enhanced density.

Another thing to think about is that it uses the index hole of your disks for timing. This means thatyou can

not use those cheap hard-sectored disks any more, and cannot write to the back side of the disk like you did with your 1050, 810, etc... Now this really doesn't matter if you use its double-sided capabilites; but if you want to make up a disk for your club or freind who has a 1050, and wish to use the back side, you are out of luck.

The High-Speed disk I/O the drive boasts is very similar to Happy's 810 warp speed. Although not as fast as ICD's *UltraSpeed*, it is fast. The setup is similar to *UltraSpeed*; you must format with a special sector skew for optimum speed, which will be slow when high-speed software is not used. Strangely enough, the drive only has a special sector skew for double density, even though the exact same command is used for single density. I have been able to read single density disks formatted with *UltraSpeed* sector skew quite nicely on the ***XF-551***. As of now, the only programs I am aware of that make use of the high-speed capabilities are my *Disk Communicator* program version 3.2, and *THE ULTRA SPEED+ OS*.

Unfortunately, Atari did not make the drive for expansion. It uses an MCU chip that takes the place of many chips the 1050 used. Because of this, and because it's not 6502 based, I don't think you will see any products such as the *Happy* or *Super Archiver* available for a while.

Well.I guess that's it. I have confirmed the bugs I found with later models, so it appears they haven't been fixed yet. Once Atari fixes these, it should be a very good drive at a nice price.

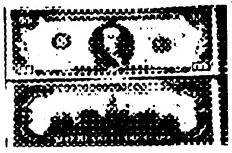
CS50

Additional Instructions for Assembly Language

Author Unknown

Submitted by James Duke

ACQT - advance clock to quitting time
BA - branch anywhere
BM - branch maybe
CHI - call for help immediate
CISR - change instruction set randomly
CNV - curse Network vehemently
DWIT - do what I'm thinking
FFF - fire fasers on full
ICBA - ignore compare; branch anywhere
ITEM - if-then-else-maybe
LFA - loop for awhile
OMT - one more time
RPM - read programmer's mind
SDIT - shut down if thunderstorm
SPSW - scramble program status word
TET - think evil thoughts



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THE GRAPEVINE

NEWS AND RUMORS IN THE ATARI COMMUNITY

Compiled by Angela Burns

EDITOR'S NOTE: The following items were collected from various sources: newsletters, magazines, newspapers, and the ever popular "grapevine". I will try to make it a regular feature, providing there is enough going on out there to bother to print. If anyone has any news to share with us, please let me know so that I can include it. AB

NEWS

SIERRA ON-LINE: The March ST Informer contains an article on the ST and piracy. In it, Sierra On-Line expresses concern over what it feels is a correlation between piracy and the ratio of consumer support questions to sales for a particular machine. They have indicated that they would like to continue to produce programs for the ST, but will be monitoring the questions/ sales ratios. Any future ST support will depend on the numbers they receive from this monitoring.

WORDPERFECT: Word Perfect Corp., as we all know, only decided to port WordPerfect, the word processor, over to the ST in response to an avalanche of requests from Atari owners. The company was disappointed to find that the program could be found on a number of Atari bulletin boards within a short time of its release. Worse, early versions were extremely buggy, and word spread QUICKLY that WordPerfect was a mess. Good news! A March update has made WordPerfect virtually bug free. Now Atari users need to do three things:

1) Buy the program. You can't expect companies to respond to letter-writing campaigns if the users don't follow up their requests by buying the programs they asked for.

2) Spread the word that WordPerfect has been perfected. Bad news travels fast in the Atari community; can we spread good news as effectively?

3) Write to Word Perfect Corporation. Let them know that you are grateful for their support and that they, in turn, have yours.

Jeff Acerson
Director of Communications
Word Perfect Corporation
288 W. Center St.
Orem, Utah 84057

COMPUTE!: The editor of the JACG newsletter reports that the May, a988 issue of Compute! magazine is totlly devoid of *any* Atari 8-bit material. No type-in programs, no news, no ads - nada. Looks like some letters might be in order.

RUMORS

Atari may extend its warranty on all equipment from the current 90 days to one full year!

1988 may see the emergence in the market of an Atari 68030 machine.

One (definitely unsubstantiated) report states that Dave Small may be leaving Data Pacific. Reason: unknown. More as (and if) it becomes available.

PRODUCT ANNOUNCEMENTS

Compiled by Angela Burns

SpartaDOS has been upgraded to access the special features of the new Atari XF551 drive. Contact:

ICD
1220 Rock Street
Rockford, IL 61101
Phone: (815)968-2228
BBS: (815)968-2229

3-D billiards for the ST! In QBall, the pool "table" is a cube; and the balls travel through the space within it! Low resolution only, $29.95. Contact your local dealer or:

Mindscape, Inc.
3444 Dundee Road
Northbrook, IL 60062

Atari has released a version of Amodem 7.5 that will allow the SX212 to be used without any interface on an 8-bit Atari computer. If you are not able to download Amodem from your local BBS or from Atari's BBS, then it is available from Atari's Technical Support division. Please send a blank floppy disk to:

Atari Technical Support
P. O. Box 61657
Sunnyvale, CA 94088

Empire, from Interstel Corporation, is a strategy/ war game for the ST. Explore the (initially blank) grid map to discover cities to conquer and enemies to vanquish; build an Empire! Color or monochrome, $49.95. Contact your dealer or the distributor:

Distributed by Electronic Arts
P. O. Box 57825
Webster, TX 77598
(713)486-4163

The newly released Canon BJ-130 buble jet printer, with a resolution of 360 dpi, reputedly produces better graphic output than a laser printer. But that's not the best part. This is: retail price is under $700!

THE DUBIOUS VALUE OF "EDUCATIONAL" SOFTWARE

By D. A. Brumleve

Reprinted from the Portland Atari Club Newsletter, 1/88

(ED NOTE: Although specific product recommendations in this article are for the ST, I think that the main text can be very helpful to 8-bit users with children, as well.)

Because I've been working with kids and computers (and perhaps because I have five kids and three computers), I am frequently asked to recommend "educational" software. This question always catches me off guard, because it brings with it an attitude regarding computers (and education, for that matter) that I simply do not share. In my experience, the educational value of a computer has more to do with HOW the computer is used than with what programs are run on it.

Most people have a concept of "educational" software which includes programs that teach or provide practice in specific academic skills. Most programs of this kind are electronic worksheets, and few serve any greater purpose than the little workbooks one can pick up for $1.29 at K-Mart. Even if I didn't know about the various studies on it, I could tell you from watching the kids that the question-and-answer-type program is not very effective. We do own a few, like Algebra I (Michtron), which our oldest likes a lot, and Decimal Dungeon (Unicorn), which he regards as "okay". But really, my feeling about computers in education is that children should use them as they are used in the real world, because a child's world IS a real world. Our basic software list for our children is essentially the same as that an adult would want.

The job doesn't end with the provision of programs, of course. The kid has to learn how -- and when -- to use them. Parents and teachers can help him learn to use the programs and play games with him, but they can also observe the child's needs and point out when the computer can help him if he doesn't think of it himself. Our son Danny hates to write manually, and I think it's because of the awkwardness of error-correction with pen or pencil. He will write long stories and reports with a word processor, though, and go over his work several times making small corrections before he prints it out. He didn't see the correction potential of word-processing until I pointed it out. The desire to type his homework provided motivation to learn touch-typing. (By the way, many children are not developmentally ready to exercise this degree of fine-motor control in the grade school years.) Danny enjoys drawing, and he uses NEO or D.E.G.A.S. to illustrate his reports. He writes his own programs for his own purposes; he has one that keeps track of his savings toward a radio-controlled car, for example.

In other words, Danny has learned to regard the computer as adults do -- as a TOOL, not a toy, and he uses it for his own real purposes just as adults do.

Thus I would recommend this "starter package" for home or school, age 8 and up: 1. A good drawing program. 2. A good, easy-to-use word proccessor. 3. A programming language. 4. A few desk accessories (especially an on-screen calculator). 5. A typing tutor (for children who do not already touch-type). 6. A music program. 7. And a LOT of games that challenge one's thinking skills.

My starter package for preschoolers is not that much different.

. . ." In my experience, the educational value of a computer has more to do with HOW the computer is used than with what programs are run on it."

SPECIFIC RECOMMENDATIONS

Providing all this software need not be an enormously expensive endeavor. There are adequate (and sometimes superior) public domain alternatives in most categories.

It also isn't necessary to provide everything from the start, although it would be wise to introduce at least one program from each category during the child's first few months with the computer. The order in which these programs should be acquired is an individual matter, depending upon the child's own needs and interests. I list below some programs in each category which children in grades 3 and over are likely to find useful and usable. There are certainly others, but these are the ones I have observed children using successfully with genuine educational benefits.

1. Drawing -- Commercial: D.E.G.A.S., D.E.G.A.S. Elite (Batteries Included). PD: NEO, Kidsketch, Kidgrid 2, Kidgraph.

2. Word Processing -- Commercial: First Word, Kidtalk (First Byte). PD: STWriter, Word 400.

3. Programming Language -- Commercial: GFA Basic (Michtron). (Forget LOGO and ST BASIC -- children of this age will simply not be satisfied with their products in these languages.) PD: No acceptable substitute.

4. Desk Accessories -- PD: Rastacalc (calculator), Eternal Ram Disk.

5. Typing Tutor (not needed if the child can already touch type) -- Commercial: Word Invaders

(Academy Software). PD: No acceptable substitute.

6. Music Program -- Commercial: Music Studio. PD: Deluxe Piano (color), GFA Piano (monochrome), Kidnotes (age 10 and under).

7. Games -- Commercial: King's Quest series, Sundog, and the like, Word for Word. (Don't invest in Infocom programs for kids -- they really need the graphics). PD: Deluxe Stone Age, DGDB (color), Awari (mono).

(ED NOTE: Though I believe the author is right in most cases about the usefulness of Infocom games for children, they can be very good if your child is particularly verbally oriented. But DO be sure to match the level of expertise required by the game to the child's abilities!)

And here's a somewhat more limited listing of recommended programs for preschoolers and first- and second-graders:

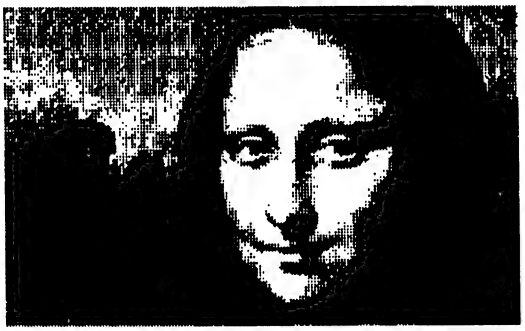
1. Drawing -- Commercial: Preschool Kidprogs (Michtron). PD: Kidgrid, Kidgraph, Kidgrid2 (these last two for kids over 4 only).

2. Word Processing -- Commercial: Kidtalk (First Byte).

3. Typing Tutor -- Commercial: ABZoo (Michtron). PD: No acceptable alternative.

4. Music Program -- Preschool Kidprogs (Michtron). PD: Kidpiano, Kidnotes, Kidsong1 (''Makin' Aiken'').

5. Games -- Commercial: Preschool Kidprogs (Michtron). PD: Barnyard2 (''Picture Barnyard'').



THE MISGUIDED USE OF COMPUTERS IN THE SCHOOLS

Most local schools provide computers in each classroom and some have ''computer labs''. The machines are used for isolated computing experiences. The kids may play an ''educational'' game or work through an electronic worksheet, or they may even learn some programming skills, but in all cases the use of the computer seems to be a separate experience, essentially unrelated to other school work and other purposes. How much more beneficial it would be if schools showed kids how to use computers FOR EVERYDAY NEEDS.

The computer becomes a tool. Now THAT'S an education.

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MAKING OLD SOFTWARE WORK WITH NEW ROMS

By Michael Schuster

Reprinted from ZMAG #78

520/1040 ST owners who install the new (4/87) "blit" ROMs in their machines, as well as buyers of Mega STs, may be rudely awakened to the fact that some older software will not run properly. (XL/XE owners: please note that strange feeling of deja-vu!)

The copy-protection routines of some games fall apart because of the differences in the way TOS now returns CRC errors on disk reads. I shall not deal with those here. Rather, I wish to share my experiences in trouble-shooting a common and more easily remedied problem: illegal use of system storage locations.

During the early ST development period, Atari released a list of system variables whose locations were to be "cast in stone" -- guaranteed not to move in any future version of TOS. These locations range from $400 to $512; and Atari does, indeed, seem to have kept its promise. However, as has happened before (this is where the XL parallel comes in), programmers insisted on using unsupported system storage locations (including the range from $840 to $A0ff) to do things more quickly or using more compact code. As we were warned they might be, however, these have all been moved.

As I searched through memory and tried to make some sense out of all this mess, it appeared to me that there is a block of system storage locations $46 bytes long which have been inserted somewhere between $840 and $93E. (Hmmm... can we say "blitter", boys and girls?) The result is that many storage locations past this point have been shifted $46 bytes upwards.

How does this help us? If we can get some idea of what a program is doing when it bombs under the new ROMs, we can look to see if this is occurring because of the use of a storage location that has been moved, then zap the program with a sector editor. Of course, if one has the source code for a program, one can simply edit it and recompile.

Some Examples The source code for Twister clearly indicates the use of the floppy control blocks to keep track of disk drive status. If you run Twister under the new ROMs, it returns an error as soon as the disk drive tries to step. Aha!! Solution: Search for $0A06 and change to $0A4C; search for $0A0A and change to $0A50. These occur once each in both Twister and the Meg-A-Minute hard disk backup program.

The same applies to those programs which change the drive B step rate for those using external 5.25" drives. See below for details.

K-Switch, Nite, and older versions of GFA BASIC look at the system location kb_shift to read the control, alternate, and shift keys (INSTEAD of using the legal BIOS 11 call). Since these programs all have features activated by combinations of these keys, they will not work as written under the new ROMs. Solution: Search for $E1B and replace with $E61.

Warnings! Zapping of commercial programs may be a violation of copyright. You must be sure you are within your legal rights to modify any program before attempting to do so.

Programs so zapped may not run under the old ROMs. It only makes sense that if you replace illegal locations with newer illegal locations, the program is now even more illegal!

Putting this all to Use Following is a list of the system storage areas mentioned above. They also happen to be the ones most commonly abused. Then comes MY estimation of where they have been moved to. For those not on the list, within this region, you can simply try adding $46 to the old value. Use this information with care, and only on a backup copy of your software. I cannot be responsible for anything which results from the use of the information herein.

Be sure that what you are zapping is really a memory location and not data, text, or opcodes which happen to match the byte pattern of the number you are searching for. Often, a memory location will appear in long form when assembled (e.g. 00000XXX) and that can be a clue that it's not text or data. If it doesn't work, make another copy of the original, and look for another zap point. Good luck!

Old location	New location	Description
$A06(word)	$A4C(word)	Floppy #0 Current Track
$A08(word)	$A4E(word)	Floppy #0 Seek Rate
$A0A(word)	$A50(word)	Floppy #1 Current Track
$A0C(word)	$A52(word)	Floppy #1 Seek Rate
$E1B(byte)	#E61(byte)	Keyboard Shift Status

I am maintaining an ever-increasing list of these. I would appreciate any new data or applications for this type of information. First Prize to the kind soul who can re-write STARTGEM to run under the new OS. I can be reached at: Michael Schuster, CompuServe [70346,17451], GEnie, Delphi, MCI [MSchuster], Usenet [schuster@dasyst.UUCP], The Night Shift BBS (718)816-7792.

Dal-Ace Calendar of Current Events

JUNE, 1988

SUN	MON	TUES	WED	THURS	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11 Main meeting at Infomart
12	13	14 Flag Day	15	16	17	18
19 BBS & 8bit SIGs Father's Day	20	21 ST SIG	22	23	24	25
26	27	28 Board Meeting	29	30		

FOR INFORMATION CALL: BBS SIG - Jim or Rachel Duke (214)404-8569. **8-BIT SIG** - Jeff Golden ((214)252-3268. **ST SIG** - Computer Discoveries (214)484-9104. **BOARD MEETINGS** - Donny Arnold (number on back page).

JULY, 1988

SUN	MON	TUES	WED	THURS	FRI	SAT
					1	2
3	4 Independence Day	5	6	7	8	9 Main Meeting
10	11	12	13	14	15	16
17 BBS & 8-bit SIGs	18	19 ST SIG	20	21	22	23
24/31	25	26	27	28	29	30

On the Fritz

Hardware Tricks and Tips From Bob Fritz

Reprinted from Michigan Atari Magazine, 1/88

Q. I saw your last column, in which you mentioned that Wico trackballs could be modified to work on the ST. How can this be done?

A. It involves making a small circuit board with an LM339 quad comparator, some resistors, and changing the wiring. So, you see, it's not just a wire switch to get it going (beside the fact that the Wico trackball has been discontinued). It would be best just to pick one up for the $30; or, if you've got a Wico lying around, maybe you can work out a deal with Zebra on a trade-in. (If there's enough interest, and room, I can put the whole How-To article in a future issue.)

Q. I purchased an ST way back in May of 1986. Recently, I bought a newer single-sided drive. On my old drive, I can read all my extended-format disks (82 sectors, 10 tracks), but the new drive just won't cut it. Also, some of the software I have (like Brataccas) won't boot from the newer drive. What's the problem, and can it be fixed?

A. That is a problem facing all new ST owners 520/1040/ST/FM/MEGA alike. The problem is that Atari switched mechanisms for some reason, probably cost or availability. The newer drives are 80-track drives, whereas the older ones could read and write 82 tracks. Atari's specs on both old and new drives say they are 80 tracks, numbered from 0-79. There is no fix at this time, other than to 1.) send any software that uses track 82 in its protection scheme back to the manufacturer stating your problem or 2.) go with a non-Atari drive such as the Indus GTS 100, which can read and write 84 tracks.

Q. I have a 130XE, and recently I was given a 20 meg IBM internal hard drive with IBM controller. Is it possible to hook this up to my Atari? What other hardware do I need, and about how much would it cost?

A. The people to contact are ICD in Rockford, IL. They should be able to set you up with a controller, case, power supply, etc., and the proper adapter for the XE. Another place to try is Supra Corp. in Albany, OR. They make a hard drive for the 8-bits and may be able to fill your needs. Addresses:

ICD
1220 Rock St.
Rockford, IL 61101
(815)968-2228

SUPRA CORPORATION
1133 Commercial Way
Albany, OR 97321
(503)967-9075

How many of the 50 computer words can you find? There should be 15 letters left over, they will make a message. If a word is repeated such as: key, move, log, it will not be within the same word. Look for it somewhere else. The words can be forward, backward, up, down or diagonally. -H.F. Neff

```
E E F Y T H A R D C U P Y T G
M X E D N I E I W U R K F T U
A D D A U T E X T A U E N D L
N M U L O C K E Y E R I D U A
I F U N C T I O N S R R G R C
K U D G F I X E D F E A U U I
E R N N R K N A L B R G T W G
Y M U S B A T W L I M U V E U
B A U A L R P A T U G R D E L
U T R I W A N H V T A I G L A
A T E S E R M E I L T A U L Y
A L I N E S R I L N S N T M U
D H P T A U T U C S G K M U N
M A X H W A D R E E E U I A I
L E F T A H O M E Y D T T I S
```

ADD
ALPHA
ALT KEY
ARROW
BAR
BLANK
COLUMN
COUNT
DECIMALS
DOLLAR
DUMMY
EDIT
ERROR
EXTERNAL
FIXED
FORMAT
FUNCTIONS
GOTO
GRAPHING
HARDCOPY
HOME
INDEX
ITERATE
KEY
KEY BOARD
LEFT
LINES
LOCK
LOG
LOGARITHMS
LOGICAL
MAX
MESSAGE
MOVE
MOVE ROW
NAME
NOTE
NULL
PRINT
QUIT
REPT
RESET
ROUND
ROW
SIN
SQRT
TAN
TEXT
TYPE
WORK

Most Wanted List

(Dal-Ace Experts)

Donny Arnold.....240-4966..... call before 10 p.m.
8-bit general knowledge.
Joe Camblin..... 221-7825..... call from noon to 2 a.m.
MIDI & desktop publishing
Larry Dineen..... (817)668-7296.... call during day.
ST general knowledge
James Duke.....404-8569
BBS, ST programming.
Eb Foerster..... 357-7602..... call from 7 to 10 p.m.
Turbo BASIC, SynFile, SynCalc, Assembly.
Ron King..... (817)283-0674.... call from 5 to 10 p.m.
8-bit hardware.
John Saunders.....(817)566-0318
C & Assembler languages.
Michael Trombley..... 298-5958
8-bit general knowledge.
Ralph Tenny..... 235-4035..... call from 7 to 10 p.m.
ST general knowledge & hardware.
Rene Tucker..... 223-6176
8-bit general knowledge.
Wally Wilinsky.. 506-0352..... call from 6 to 10p.m.
MIDI
John Winer..... 907-1348
Systems programming and general knowledge.

Infomart Directions

From North Dallas, take either Stemmons (I-35E) or the Dallas North Tollway south. From Stemmons, take the Oak Lawn exit, turn east, and park at the Infomart. If you are using the tollway, exit right on Wycliff, go left on Harry Hines Blvd. to Oak Lawn, and turn right. From the south, take Stemmons north, then follow above directions. Infomart is the big, white, steel and glass building south of the other 'marts.

GUESTS ARE WELCOME!!!

NOTICE

The editor of the Dal-Ace newsletter reserves the right to edit all submissions for spelling, grammar, punctuation, clarity, and for reasons of space limitation.

Under ***no*** circumstances will s/he alter the meaning or basic content of your work.

Newsletter Submissions

Submissions are welcome in any format. It is requested of the 8-bit user that s/he upload articles to the club BBS (number on back page).

Newsletter Advertisements

Personal ads are free to all current members. Please see the editor for details.

Commercial Rates

Full page.....$35.00
Half page.....$25.00
Quarter page..... $15.00
Business Card.....$10.00

Ads must be CAMERA READY. Copy must be received prior to the submission deadline. Mail copy to the address on the back page, or contact the advertising manager, editor, or Vice President of Communications. Copy received after the deadline will be run the following month. For contract advertisers, if no new ad is received prior to the deadline, the most recent ad will be run.

Disclaimer

The material printed in this newsletter reflects the opinions of the authors. Opposing opinions are solicited. Unless otherwise stated, the material in this newsletter is ***NOT*** copyrighted and no rights are reserved.

The purpose of this newsletter is to present information for your consideration. Neither the editor nor Dal-Ace make any claims for the validity or usefulness of this material. The reader is the final judge of any product or advice presented.

Infomart Meeting Dates

1988

Firm dates: June 11, July 9.

Tentative dates: August 13, September 10, October 15, November 19, December 17.

Meeting Information

10:00 - 11:00..... 8-bit SIG
11:00 - 11:30..... Disk sales
11:30 - 12:00..... Main meeting
12:00 - 12:30..... BBS users SIG
.....New users SIG
.....Newsletter Exchange
12:30 - 2:00..... ST SIG

Product	Publisher	List Price	Sale Price	User Group Disc. Price	User Group Cash Price	Total % Discount
		UTILITIES				
Backup	MichTron	39.95	35.96	32.36	30.74	23
Copy II ST	Central Point Software	39.95	35.96	32.36	30.74	23
Disk Doctor	Antic	29.95	26.96	24.26	23.05	23
Hard Disk Accelerator	Beckmeyer	39.95	35.96	32.36	30.74	23
LabelMaster Elite	Migraph	44.95	40.46	36.41	34.59	23
M-Cache	MichTron	39.95	35.96	32.36	30.74	23
Oscar	Softlab	39.95	35.96	32.36	30.74	23
PIE (Professional Icon Editor)	Antic	29.95	26.96	24.26	23.05	23
ProCopy	ProCo Products	34.95	31.46	28.31	26.89	23
Stuff	MichTron	39.95	35.96	32.36	30.74	23
Super Directory	MichTron	39.95	35.96	32.36	30.74	23
Tune Up	MichTron	49.95	44.96	40.46	38.44	23
Turbo ST	SofTrek	49.95	44.96	40.46	38.44	23
Universal File Selector	A & D	15.95	14.36	12.92	12.27	23
		Word Processing				
Desktop Publisher ST	Timeworks	124.95	105.95	95.36	90.59	28
1st Word Plus	GST	99.95	79.96	71.96	68.37	32
Fontz!	Neotron Engineering	34.95	31.46	28.31	26.89	23
Microsoft Write	Atari/Microsoft	129.95	103.96	93.56	88.89	32
Publishing Partner	Soft Logik	89.95	80.96	72.86	69.22	23
Word Perfect	Word Perfect	395.00	274.95	247.46	235.08	40
Word Up	Neotron Eng.	79.95	71.96	64.76	61.52	23
Word Writer ST	Timeworks	79.95	59.95	53.96	51.26	36
		Telecommunications				
Flash	Antic	29.95	26.96	24.26	23.05	23
Interlink	Intersect	39.95	35.96	32.36	30.74	23
Modem, Anchor 2400e	Anchor	249.95	174.95	157.46	149.58	40
Modem, Avatex, 1200HC	Avatex	110.95	99.86	89.87	85.38	23
Modem, Avatex, 2400	Avatex	249.95	199.95	199.95	189.95	24
Modem, Supra 2400	Supra	174.95	157.46	141.71	134.62	23
ST Talk	QMI	17.95	16.16	14.54	13.81	23
VT100 Emulator	Atari	39.95	35.96	32.36	30.74	23
VT220 Emulator	MichTron	46.95	42.26	38.03	36.13	23
		Education				
Atari Scholastic Series	Atari	19.95	17.96	16.16	15.35	23
All About America	Unicorn	59.95	40.46	36.41	34.59	42
First Letters and Words	First Byte	49.95	39.96	35.96	34.17	32
First Shapes	First Byte	49.95	39.96	35.96	34.17	32
Kid Talk	First Byte	49.95	39.96	35.96	34.17	32
Math Talk	First Byte	49.95	39.96	35.96	34.17	32
Math Talk, Fractions	First Byte	49.95	39.96	35.96	34.17	32

* User Group Discount applies to software only.

Product	Publisher	List Price	Sale Price	User Group Disc. Price	User Group Cash Price	Total % Discount
GRAPHIC & ART						
Advanced Art Studio	Firebird	44.95	35.96	32.36	30.75	32
Aegis Animator	Aegis	79.95	63.96	57.56	54.69	32
Athena II	Iliad	89.95	80.96	72.86	69.22	23
Cad 3D 2.0 (Cyber Studio)	Antic	89.95	71.96	64.76	61.53	32
Chameleon	Future	29.95	26.96	24.26	23.05	23
Computer Eyes	Digital Vision	249.95	224.96	202.46	192.34	23
Cyber Control	Antic	59.95	53.96	48.56	46.13	23
Cyber Paint	Antic	69.95	62.96	56.66	53.83	23
Degas Elite	Electronic Arts	69.95	62.96	56.66	53.83	23
Easy Draw 2.3	Migraph	99.95	89.96	80.96	76.91	23
Easy Draw with Super Charger	Migraph	149.95	134.96	121.46	115.39	23
First Cadd	Generic	49.95	44.96	40.46	38.44	23
GFA Artist	MichTron	71.95	64.76	58.28	55.37	23
GFA Draft	MichTron	99.95	89.96	80.96	76.91	23
IMG Scan	Seymour-Radix	99.95	89.96	80.96	76.91	23
Make it Move 2.0	Avila	49.95	44.96	40.46	38.44	23
Neochrome	Atari	39.95	35.96	32.36	30.74	23
Quantum Paint	Eidersoft	49.95	40.45	36.41	34.58	31
Spectrum 512	Antic	69.95	62.96	56.66	53.83	23
ACCOUNTING, SPREADSHEETS, & DATA MANAGEMENT						
A-Calc Prime	Antic	59.95	53.96	48.56	46.13	23
A-Chart	Antic	39.95	35.96	32.36	30.74	23
Base II	Antic	59.95	53.96	48.56	46.13	23
DB Man	Atari	249.95	212.46	191.21	181.65	27
Data Manager ST	Timeworks	79.95	71.96	64.76	61.52	23
E-Z Calc	Royal Software	69.95	62.96	56.66	53.83	23
Home Accountant	Haba	49.95	44.96	40.46	38.44	23
Masterplan	ISD Marketing	99.95	89.96	80.96	76.91	23
Pha$ar	Antic	89.95	80.96	72.86	69.22	23
SuperBase Personal	Progressive Peripheral	149.95	134.96	121.46	115.39	23
Swift Calc ST	Timeworks	79.95	71.96	64.76	61.52	23
The Informer	Regent	99.95	89.96	80.96	76.91	23
VIP Professional	ISD Marketing	149.95	134.96	121.46	115.39	23
LANGUAGES						
Assempro	Abacus	59.95	47.96	43.16	41.01	32
GFA Basic	MichTron	59.95	53.96	48.56	46.13	23
GFA Basic Book	MichTron	39.95	35.96	32.36	30.74	23
GFA Basic Compiler	MichTron	59.95	53.96	48.56	46.13	23
GFA Companion	MichTron	49.95	44.96	40.46	38.44	23
Laser C	Megamax, Inc	199.95	179.96	161.96	153.86	23
Personal Pascal	OSS	74.95	67.46	60.71	57.67	23
PRODUCTIVITY						
Certificate Maker	Springboard	49.95	44.96	40.46	38.44	23
Deskcart	QMI	99.95	79.96	71.96	68.37	32
FAST (Desktop Organizer)	Migraph	49.95	44.96	40.46	38.44	23
Maps & Legends	Antic	34.95	31.46	28.31	26.89	23
Microlawyer	Progressive Peripherals	59.95	53.96	48.56	46.13	23
Partner ST	Timeworks	49.95	44.96	40.46	38.44	23
Print Master Fonts & Borders	Unison	34.95	31.46	28.31	26.89	23
Print Master Plus	Unison	39.95	35.96	32.36	30.74	23
Print Master Fantasy Art	Unison	24.95	22.46	20.21	19.20	23

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DAL-ACE
Dallas Atari Computer Enthusiasts

DAL-ACE is an independent user education group not affiliated with the Atari Corporation. This is the official newsletter of DAL-ACE and is intended for the education of its membership as well as for the dissemination of information about Atari computer products.

DAL-ACE membership is $16.00 per year. BBS-ONLY membership is $10.00 per year. This newsletter is written, edited, and published by volunteers. Its availability and/or distribution may, at times, be subject to circumstances beyond the control of the club officers. A pink address label indicates that your membership expires this month.

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