Saint Paul ATARI Computer Enthusiasts

SPACE

An independent computer user group

DECEMBER — 1984

Bytes

From the Pres.

The big news this month is that Atari has decided to wish us all a "Merry Christmas" by drastically reducing prices and announcing new machines compatible with our existing ones. It appears that Tramiel is coming out fighting and will be aggressive. This is good news for all of us Atari computer owners.

This is a rundown of the news from Infoworld, Compuserve (ANTIC interview with Tramiel), and newspaper ads. It may all be old news by the time you see this. I'll have some copies of pertinent articles for you to see at the meeting.

Pricing: Manufacturer's list price is now $119.95 for the 800XL and $179.95 for the 1050 drive. Other Atari peripherals will be drastically reduced in price, too. Substantial discounting of these prices may be seen as well. Tramiel says $49.95 will be the top price for Atari software. Their strategy is for "rock bottom pricing".

800XL: Atari will continue to produce the 800XL.

New 8-bit Computers: Atari will show three to five 8-bit computers at the January CES show. These are all compatible with existing machines. Presumably one of these is the 800XL. Another one is to be a 128K version of the 800XL. All are to be available during 1st quarter of 1985 (we hope).

New Peripherals: There will be a new color printer and a 300/1200 baud direct connect modem shown at the CES show.

PLATO Cartridge: This is to be Atari's #1 new software product. At the above mentioned $49.95 maximum, They should sell a bunch. Atari is strongly committed to telecommunications.

New Ad Campaign: "Even Scrooge would give one ..." is the slogan for the full page Atari ads seen in recent newspapers. This appears to be an aggressive campaign.

User Group Support: Tramiel pledged support for User's Groups. I think he figures he can get a lot of free mileage from a little support. He says user groups will be "a clearing house of information" and Atari would support these fully. I hope he comes through.

Atari EXPLORER: This will be a new Atari monthly publication for Atari owners.

Game Machines: The fate of the 7800 pro-system has not been decided - it may never be produced. The fate of the 2600 will be decided during January.

Games Software: They are making arrangements to make new games from Atari Coin-Op Division (not part of Tramiel's Atari) available for Atari computers. They are re-negotiating contracts with third party software companies for continued support of Atari computers. Lucasfilm was mentioned as one of these outfits.

16 & 32-bit Computers: There will be at least one 16-bit machine introduced at the CES show. There will be at least two 16-bit machines eventually. The one being shown will have two Sony 3.5" disk drives. A 32-bit machine will be introduced in April at the Hanover, West Germany computer show. Both computers will use "GEM", a new operating system featuring icons, pull-down menus, overlapping windows, mouse, etc. New software will have to be developed for

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these machines. These are not IBM clones. They would be capable of running the "heavy duty" programs out there such as Lotus, Framework, etc., although no arrangements have yet been made with these manufacturers to convert their software. The 32-bit machine is being referred to as a VAX in a box. It will be based on the 32032 microprocessor. Pricing on all Atari computers will be kept within a $100 to $1000 price range.

General: Atari is producing 150,000 800XL's per month. They predict $1 billion in sales for 1985. They have collected only $50 million of the $300 million due them from debts of the pre-Tramiel days. Atari plans to make a public stock offering sometime in 1985.

In other club news, SPACE is buying a modem for use by its newsletter editor. In the near future, we will be able upload articles to the BBS and Jon Nelson will be able to download them for use in the newsletter. Steve Pauley, Computer Food, is offering the club a special deal on our modem. I urge all of you with modems to call up the BBS (544-9058) and leave a private message (option P) to the sysop for a password. Also, let's get some articles to Jon. I think reviews are the easiest type of article to write. Let us all know what you think of that new program you bought.

Speaking of the BBS, it is struggling at the moment with 1 disk drive. The 2 Percom drives have been sent in for repair. Someone at TAIG has offered use of another disk drive temporarily. It may be running OK by the time you read this. Incidentally, I believe we will be offering XMODEM and compiled XMODEM on the disk of the month for December. This is the best way to transfer files on the BBS.

We have reprinted some articles from TAIG this month. We are pursuing active trading of articles with TAIG. Let's be sure to contribute our share of articles.

The newsletter did not get out on time last month due to a postage problem. The newsletter must be folded in half to qualify for our normal postage. We all apologize to those who were inconvenienced.

The computer show at the Science Museum was really good and lots of fun. I'd like to thank Jon and Andy Mills (and his mother) for spending a lot of time demo'ing at the show. They brought an 800XL, Indus drive and software. Jon Nelson was there, too, helping out. We had a great time. Perhaps the best part of th show for me was a 30 minute demo of the light pen by an unknown four year old. Lots of people were fascinated at the ease of use. I think we'll get 4 or 5 new members due to the show. This show was far better than last month's show.

Speaking of the light pen, I found out at TAIG the other night that the light pen works with 400 computers, but must be used in joystick port #4. I checked this out and it works fine. Steve Pauley is working out details so that those interested should be able to obtain one for Christmas. $42.97

A member approached me at the last meeting about forming a Women's Atari Interest Group. We will bring the subject up at the next meeting. We can also discuss any other interest groups you may be interested in forming.

I am going to the CES show in Las Vegas on January 5 to 8. Is anyone else going? It promises to be very interesting for Atari users. I'll have up-to-date info for you at the January meeting - only 5 days after the show.

I would like some help with the TV set. If anyone would care to bring the TV to the meetings, I would greatly appreciate it. In return, you get to use a 19" color TV in your home the rest of the month. This is a cheap way (free) to have a color TV at home, or a separate one for your computer. The only requirements are that you are a SPACE member and that you bring the TV (or arrange to have it brought in your absence) to every meeting. Let me know at the meeting, or call me ahead of time - first come, first served.

Lastly, I'd like to wish you all a happy holiday season and a great Atari New Year!

SURGE PROTECTION
by Bennett Porter

The thunderstorms of last summer have renewed interest in the dangers of "voltage spikes" caused by lightning. For many of us the thought of plunking down $50 to $75 for a commericially made surge portector is too much for this seemingly rare event. Instead we take our chances or we unplug our computers if we remember. Another alternative was described in detail in the December 1983 issue of BYTE magazine-you can MAKE YOUR OWN SURGE PROTECTOR.

BYTE is a well known journal in the microcomputer world. I found that most major libraries have all the issues going back for years. The article we're interested in shows how to make an equal or better surge protector for $5.00. That's right five dollars. What's better is that if you can boil water you can make it. You don't go near your computer, instead you solder three metal oxide varistors(MOV's) to your multi-socketed power strip.

This project has been so popular nationally that there has been a tremendous shortage of MOV's at Radio Shack. Because of this the August 1984 issue of BYTE named four more sources for MOV's including a firm here in Minnesota.

DISK AND TAPE O.T.M.

This month there will be at least two Christmas-type programs on the disk of the month. One of them is a member-written program, come to the meeting for a demo; the other is a surprise. The rest of the D.O.M.s just came in the mail!!! MORE SURPRISES!

PLEASE remember that when you purchase the D.O.M., all of the money received goes into the club's treasury. This income, keeps SPACE alive, and helps pay for your monthly newsletter.

If you want to save some of your hard-earned money, here's a TIP!! Take the last 12 or so D.O.M.'s and starting with your first one, copy the second one you have on the back side, by using the switch on your disk, or cutting a notch on the other side. Continue doing this to date, and for every 12 D.O.M's you have, you will have 6 disks to reformat and use for other programs.

BRUCE HAUG D.O.M.

November Meeting Minutes

The last SPACE meeting was held on Friday, November 9. Bob Floyd, the president, reported that he and Bruce Haug, the vice president, had manned an Atari information booth at the Twin Cities Computer Show. Several people attending the show expressed an interest in SPACE; Bob expects that 5 or 6 of these people will sign up for membership. Bruce Haug reminded everyone that SPACE has run out of new programs for the disk/cassette of the month. Members are asked (begged) to PLEASE submit programs to the club since disk/cassette of the month sales provide an important source of club revenue.

In the new business section, Bob polled the club members for their opinions about the club purchase of a modem. The modem would allow the newsletter editor to exchange articles with the TAIG newsletter editors and it would also make it easier for members to submit articles to the newsletter. The use of the club's modem would be one of the "perks" for being newsletter editor. The modem could also be used for other (i.e., non-newsletter) purposes. When the proposal was put to the vote, the majority of club members voted to purchase the modem.

A new bulletin board service organized exclusively for Atari users was announced. The bulletin board number is 561-4110. In a recent issue of Antic, it was announced that Atari has a new in-warranty servicing policy. There are no authorized service centers for in-warranty work. People encountering problems with their computers within the warranty period are instructed to return the computer to the store where they purchased it for over-the-counter exchanges.

At the end of the meeting, Bob demonstrated a light pen which operates with MicroIllustrator software. The company which manufactures the light pen has offered SPACE a discounted group purchase price if enough members are interested.

Ramrod XL and Omniview XL

These two products add much versatility to your 800 XL computer. With the Ramrod XL, you have no need for the Atari Translator diskettes. It is a replacement operating system that closely matches the old Rev. B operating system in the 800 computers. This product comes with a three position switch. In one position, you have the normal 800 XL computer on your hands. If you put the switch in the middle position, you will now have the Newell Industries OS that is very compatible with the Rev. B OS. And it has a few enhancements of its own. Like faster keyboard response, user definable baud rate for cassette I/O, and the Omnimon machine language Monitor. Omnimon is a resident monitor that allows you examine the computer's memory, disassemble and assemble codes on the fly and many other things. For a hacker, this product only makes the device worth getting.

And if you decide to spend a little more money, (the third position of the switch is used to select this option) you can get the Omniview XL to go with the package. What the Omniview XL will do for you is give you an 80 column display via software. It uses judicious color selection and a well designed character set to achieve this in Gr. 8, you do lose 8K of programming space when you use it though. Of course, it is not as good as a hardware created 80 columns would be, but heck, this is not a shabby display either. With this enhancement, it makes calling up BBS's a pleasure. You don't know how nice 80 columns is until you try it. Also including with the Omniview XL is software patches that you could execute on Letter Perfect and Data Perfect from LJK Enterprises.

I suppose, now that I got your curiousity going, you want to know how much you would have to spend to upgrade your computer to this level of sophistication? The Ramrod XL sells for $140 retail, the Omniview XL is another $40 on top of that. So, for $180, you get a new operating system that is superior to the old one, a machine language monitor and an 80 cloumn display. Just think, I spent $300 for a hardware 80 column display, but I could have lived with the Omniview display also.

You must have the Ramrod XL to use the Omniview XL. The Ramrod XL takes about 15 minutes to install and is a piggy-back pc board. You take out the OS chip and plug it into this board and then you plug the board into the empty socket. The next step is to create a hole in the back of your computer to put the switch in. All in all, it is fairly simple to put in and I even managed to do it by myself.

This is one of the few hardware enhancements that I would recommend putting in your computer. Seriously consider this device. It is worth it!

WANT ADS

Now it is possible for members to place 'Want Ads' in this newsletter. The ads may be for selling used hardware, used software, tutoring services, or just about anything that has to do with Atari. The rates are as follows:

6 Lines	$1.20	216 Letters
1 Line	.25	36 Letters

The following is a list of advertising rates for vendors or individual members.

Full page	$18.00	7-1/2" X 10"
Half page	10.00	3-5/8" X 10"
Half page	10.00	7-1/2" X 5"
1/4 page	5.50	3-5/8" X 5"

All advertisements must be paid for when they are submitted. Deadline for ad placement is the last Friday of each month. To place ad or for more info, call the editor.

YOU'RE A COMPLETE KNEEBITER, DENT!!

Grab your towels and be sure to plug your ears so you don't accidently hear Vogon poetry. Hitchhiker's Guide to the Galaxy adventure from Infocom is out!

Adventure with your favorite alien from a small system near Betelgeuse named Ford Prefect and stick that in your ear. Of course, if you don't use the babel fish, you wouldn't have to listen to the captain's poetry.

You start the game in bed with a splitting headache and no robe on. Your mission is to somehow survive and explore

the galaxy with Ford. So grab your Hitchhiker's Guide to te Galaxy computer-book and enjoy yourselves. The game sells for $34.95 and comes in the new style of packaging of Infocom's. The game is rated as a standard level adventure. Now if I only could stop getting killed by that blasted bulldozer.

BIT MANIPULATION
by Bennett Porter

The Atari's disk operating system allows us to store about 88K on each disk. Even the new 1050 disk drives with their enhanced density allow for only about 1 and 1/2 times this. Many of us may have hostilely glanced at other computers whose disks store much more.

One answer to this problem is to compact the data into a more efficient form. This can easily be done because most data can be grouped into catagories. As an example:

boy/girl, righthanded/lefthanded,
married/single, child/adult,
member/non-member.

Instead of having the disk store "boy" in three bytes or "girl" in four bytes why not just use the seventh bit of one byte to store this information. Each byte is made up of 8 bits(7 to 0) so:

"boy" = 10000000
"girl" = 00000000

Using the PEEK command the memory location for "boy" would be equal to 128 and "girl" to 0.

A more complex example follows:

"boy	"girl
lefty	righty
adult	child
single	single
TAIG	non-TAIG
democrat	republican
minnesota	not-MN
cool"	nerd"
=11110111	=00011000

The memory locations with PEEK would show the decimal equivalents of the above numbers as 247 for the first example and 24 for the second example. It's hard to believe that so much information could be stored in one number!!

Atari BASIC (nor any other basic) allows us to change individual bits with a specific command but unlike other basics we can easily enter machine language subprograms with the USR command. I just wrote a short machine language program to change the bits and another to read the bits. You don't need to understand the machine language to use the programs just a little about how to use the USR command.

First load the code into page six. To enter the "write" program

type:

```
A=USR(1536,ADR(byte$),FBIT,SBIT,NU)
```

```
where      1536 = address of code
     ADR(byte$)= address of byte to
                 change.
          FBIT = top bit to change
          SBIT = low bit to change
            NU = decimal number to insert
             A = -not used-
```

To enter the "read" program type:

```
A=USR(1589,ADR(BYTE$),FBIT,SBIT)
```

```
where      1589 = address of code
     ADR(byte$)= address of byte to
                 read
          FBIT = top bit to read
          SBIT = low bit to read
             A = decimal answer
```

This machine code is not relocatable so it must be loaded into page six (starting at 1536). Also the program does not check for the range errors. The numbers must fit into (FBIT minus SBIT). If they do not the higher bits will not be interpeted.

EXAMPLE PROGRAM

```
5  DIM NAME$(20),BYTE$(1)
10 GOSUB 200:REM LOAD CODE IN PAGE 6
20 ? "ENTER NAME";:INPUT NAME$
30 ? "ENTER AGE";INPUT AGE
40 A=USR(1536,ADR(BYTE$),6,0,AGE)
50 ? "ENTER SEX(1=MALE,0=FEMALE)"; :INPUT
SEX
60 A=USR(1536,ADR(BYTE$),7,7,SEX)
70 OPEN #1,8,0,"D:TEST":? #1;NAME$:
   PRINT #1;BYTE$:CLOSE #1
```

```
80 OPEN #1,4,0,"D:TEST":INPUT
#1;NAME$:INPUT #1;BYTE$
90 PRINT "YOUR NAME IS ";NAME$
100 AGE=USR(1589,ADR(BYTE$),6,0)
110 YOU ARE ";AGE;"YEARS OLD"
120 SEX=USR(1589,ADR(BYTE$),7,7)
130 IF SEX THEN PRINT "AND YOU LOOK
    LIKE ITS' BEEN ";AGE;" ROUGH
    YEARS!"
140 IF NOT SEX THEN PRINT "BUT YOU
    DON'T LOOK A DAY OVER ";AGE-10
200 FOR X=1 TO 105
210 READ CODE
220 POKE 1535+X,CODE
230 NEXT X
240 DATA 104,104,133,204,104,133,203,
    104,104,133,206,104,104,133,
    205,168,162,0,161,203,57,45
250 DATA 6,196,206,200,144,248,129,
    203,104,104,166,205,240,4,
    10,202,208,252,1,203,129,252
160 DATA 96,254,253,251,247,239,223
    191,127,104,104,133,204,104
    133,203,104,104,133,206,104
270 DATA 104,133,205,168,169,0,25,97
    6,196,206,200,144,248,162,0,
    33,203,164,205,240,5,24,106
280 DATA 136,208,252,134,213,133,212
    96,1,2,4,8,16,32,64,128
290 RETURN
```

Flight Simulator II

Review by Jeff Nelson

This is the most advanced, realistic flight simulator yet made for the Atari. Made by SubLogic, the program requires at least 48K of memory (it uses the 64K in the 800XL) and one disk drive. One or two joysticks are optional as well as your own blank disk to store your location (a final approach, etc.)

If all you're after is just a flying game, this isn't it. The plane you are controlling is closely modelled after a Piper Archer and has all of its instruments, controls, and flight characteristics. In addition to the control stick and rudder pedals, the pilot can manipulate the throttle, mixture, flaps, carburetor heat, magneto switch, and choose between left or right fuel tanks. Three radios are included with you can navigate and do precision instrument approachs. Over 80 airports are available to fly to and from, many of which have VOR and NDB radio facilites co-located. Scenery areas are the Seattle, Chicago, Los Angeles, and New York areas. In Chicago some of the details visible out the window are Lake Michigan, the John Hancock and Sears buildings, and highways (in addition to the airports). New York has the Brooklyn Bridge, Statue of Liberty (you can actually see her face!), and the World Trade Center. Los Angeles and Seattle both have mountains in addition to their cities and oceans.

Pushing ESC while operating the plane allows you to adjust the time of day (it gets dark after nine), the season, latitude and longitude, up to three cloud and wind levels, and the aircraft's orientation. If a crash appears imminent, just push ESC and add 20,000 feet to your altitude.

Flying qualities are good, but it takes awhile to get a feel for the controls. I am a pilot myself and still was unable to make a successful landing for a couple of hours. The computer takes everything into account, adjusting attitude, airspeed, and altitude when you make a change in power or pitch. It stalls just like the real one, and can handle simple aerobatics. I've done rolls, loops, and several other maneuvers that I'm not quite sure have names. SubLogic says in one of the manuals they are negotiating with the FAA to have the program certified to allow you to log simulator time in your pilot's logbook. Incidently, there are two manuals that come with the program that cover basic aerodynamics, the controls, "how to fly", and everything else necessary to either a novice or experienced pilot.

If you still aren't convinced a flight simulator is a good piece of software for you, try the WWI Ace option. Radios are removed from the instrument panel and you're in command of a WWI fighter. Your mission is to blow up enemy factories and shoot down the defending airplanes. This is the most realistic flying game I've seen and yet is simple enough to manage that it's still fun.

WANT ADS

For sale: VisiCalc $40. Call 484-9027 Ask for Jeff or Jon.

V.P. NOTES AND QUESTIONS

People ask me questions, and usually I have an answer, but sometimes the answer is not complete. So here are some questions, does someone have the answers?

Is there a program in our library that will copy machine language tapes to disk??? Or does someone have or know where to get such a program.

Most of the 400's in the club are upgraded to 48K or 64K; is there an 800 upgrade from 48K to 64K???

Does AtariWriter work with other printers, or do you need an Atari printer?

If you can answer these questions, please do so at the next meeting; Or better yet, tell the whole club at the meeting.

Bruce Haug V.P.

NOTES FROM THE EDITOR

First, I'm sorry for the disagreement last month between the newsletters and post office. It won't happen again.

Second, it has come to my attention that MACE is willing to trade disk-of-the-months with any other Atari user groups. Interested?

Third, I'd like to respond to one of the questions asked in the V.P.'s column about using non-Atari printers with AtariWriter. It works fine for me (that's what this newsletter is made on). I use the [CTRL]-O command along with the printer control codes.

Finaly, I would like to thank the person responsible for the suggestion getting a modem for the editor. It will certainly be a big help in getting more information to you.

Jonathan Nelson
(The Editor)

S.P.A.C.E. Membership Application

Name_____Phone_____Date_____

Address_____City_____State____Zip_____

Equipment/System-Used_____

Area of interest_____

Special skills, interest, info which might be shared._____

_____

Optional
information: Occupation_____Employer_____

Dues: $10.00 per year - please inclose check with application.

Mail application and dues to:
St. Paul Atari Computer Enthusiasts
748 Amber Dr., Shoreview, MN 55112

DISK OF THE MONTH

The disk/tape of the month contains programs from the club library. The tapes can be purchased for $3 and the disks for $4. The group makes a small profit from the sale of these which go toward supporting some of the things the group does. Each disk/tape usually contains eight to twelve programs. Most of these programs are games with some utilities and demos mixed in. The programs are obtained from trading with other user groups and from submissions from local members. Members who submit a program will receive a disk or tape of the month free! What a deal!!

--THIS MONTH'S PROGRAMS--

Unfortunately, the titles were not available at printing.

TIPS'N'TRICKS

If you are using a bi-directional dot matrix printer; for the final copy of a report, switch the printing mode to uni-directional. It takes longer, but it lines the columns up much nicer. You may not have noticed it, but because the print head travels both directions it normally staggers the lines slightly.

Elsewhere in this newsletter cutting notches in disks is mentioned (for double-siding disks). One easy way to do this is to use a paper punch. What tricks have you found? Let us all know.

Bob Floyd . . . President	487-2627	Jon Nelson . . . Editor	484-9027
Bruce Haug . . . Vice-Pres	774-6226	Max Feuer. . . . Treasurer	483-3895
Bruce Haug . . . Disk Lib.	774-6226	Bruce Haug . . . Cass Lib.	774-6226
Jim Schulz . . . Paper/Ed. Lib.		Joanne Floyd . . Secretary	487-2627

SPACE/TAIG Bulletin Board . . . 544-9058

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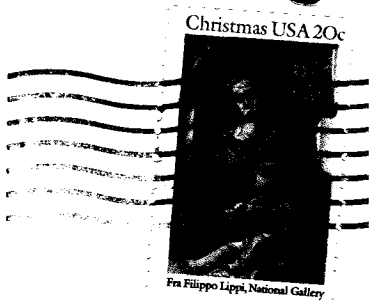

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Next SPACE Meeting:
Friday, December 14, 1984
8:00 P.M.

Minnesota Federal Savings & Loan
Lexington Ave. near Larpenteur
Roseville, Minnesota