$1.50

PORTLAND ATARI CLUB

SEPTEMBER 1986

NEXT GENERAL MEETING

Monday, Sept. 8, 1986, at 6:30 p.m.
Northwest Service Center
1819 N.W. Everett St.

PAC Bulletin Board Systems
24 Hours - 7 Days a Week

#1 - (503) 245-9405 - 300/1200 BPS
#2 - (503) 245-4608 - 300/1200 BPS

IN THIS ISSUE

P O R T L A N D A T A R I C L U B

(Not affiliated with ATARI, Inc.)

PAC Board of Directors

President:	Vern Vertrees	647-2855
Vice President:	Elanna Schlichting	285-4471
Secretary/Treasurer:	Dan Gibson	665-6912
Membership Secretary:	Jim Miller	641-6356
Program Director:	Jim Berry	223-3712
Club Librarian:	Jerry Andersen	655-3914
Special Interest Groups:	Thomas Brown	644-6674
Special Projects:	Chuck Hall	626-3717
Sergeant-At-Arms:	Tom Addis	254-9117
Newsletter Editor:	DeLoy Graham	649-6993
Advisor:	Chuck Hall	626-3717

PAC NEWSLETTER STAFF / SIG MEMBERS

DeLoy Graham, Editor

Steve Billings	- Art Director
Debbie Billings	- Art Assistant
Lee Gassaway	- Ad Coordinator
Chuck Hall	- Columnist
Peter Hoesly	- Mailing Assistant
Clyde List	- Cartoons
Clyde Pritchard	- Final layout
Debbie Pritchard	- Production Coordinator
Kevin Roethe	- Mailing Coordinator

 Material for publication may be submitted in the following formats: ST text files, Atari DOS II text files, LJK text files, printed, typewritten, or legible handwritten copy. Media may be sent to the editor at the address below and will be returned to the submitter. Contact the editor for instructions on uploading submissions to the PAC BBS.

Commercial Advertising Rates: full page (7 X 9 1/2) - $50, half page (7 X 4 1/2) - $25, quarter page (3 1/4 X 4 1/2)- $15. Ads must be prepaid and a 1/3 discount is given for 3 consecutive ads. The copy may vary in content, but the space must be the same in each issue. Send camera ready copy and check payable to PAC at the address below. Ad deadline is the 5th of the month prior to publication. Please **contact Lee Gassaway** (591-5252 or 642-2455) on all matters pertaining to advertising.

Membership is $20 per year and includes a subscription to this newsletter and access to members-only functions. Single copy price of the newsletter is $1.50. General meetings are open to the public and start at 6:30 p.m. on the 1st Monday of each month (2nd Monday in the case of holidays) on the date and at the location listed on the cover of this newsletter.

Exchange newsletters, articles, correspondence and ads should be sent to the following address:
Portland Atari Club, Attention: (appropriate board member), P.O. Box 1692, Beaverton, OR 97005

Printing done by Hillsboro Quick Print, 435-B S.E. Washington St., Hillsboro, OR 97123, 640-3649

PRESIDENT'S COLUMN
Vern Vertrees

Wow, where did our summer go? It just disappeared for me, but I hope you had a good one. I want to first tell you how pleased I am with all of you. I have had a chance to talk with several user group presidents this summer, and some of them have real problems and concerns about their clubs splitting up because of the ST. I did receive a few complaints early on, but I'm now positive that we've made it over that hump. Thanks to all of you for your understanding and participation in this club, we have pulled together to keep things on an equal basis. It will take even more from each of you to keep us going in the right direction. We have tried to keep our newsletter informative for all, and balance our reviews for all hardware and software. This is harder to do than you think. DeLoy has tried hard to keep it balanced for eight-bit and sixteen-bit with the articles submitted by all of us, but he can always use more. We are one of the largest Atari user groups in the country, so we should be able to keep our newsletter filled with news and reviews **from our own members.** You don't have to be a writer--just submit your thoughts on a game or program that you like or dislike and want to share with others. Try it! You might like it.

Our meeting attendance as usual has been down a bit for the summer, so for those of you who have missed lately I will try to fill you in on what is going on. We have been giving out door prizes for eight and sixteen-bit computers, depending on which you chose to enter. Last month, we gave out five titles for each with the latest and greatest new title being the top prize.

We are also trying a new meeting format that I will try to explain. The doors open at six p.m. for the salesroom where new and used hardware and software can be sold by any club member, including stores and manufacturers. I have seen some good buys in this room lately. Then at seven p.m. our meeting starts in the auditorium with the business, questions and answers, latest rumors and facts. Then our drawing for the door prizes and with that over we close the meeting and start our demonstrations on two eight and two sixteen bit computers, so that you can move from one to the other to see what interests you. I received a lot of good comments from some of you after we tried this format at our last meeting, so we will try it again in September. Please let me know how you like it or give me new ideas.

It is exciting to read the statistics on our Atari computers when you stop to think about what we were seeing two years ago. Here was a computer company slowly dying, then bought buy some guys named Tramiel who had been our biggest rivals. Now we read that not only is the ST selling well, but that the eight-bit sales have doubled since the introduction of the XE. Now, that is exciting!

The upcoming All-Atari Show is really taking shape now thanks to Chuck Hall, our special projects director, and all of you who have volunteered to help. This is going to be a very busy time for us all, but it will be well worth it in the end when our show is a big success.

Come out and join us at the next PAC meeting for a good time and get involved in one of our many projects.

One more thing, remember that our next meeting is on the second monday, the 8th of September due to Labor Day. I hope to see you there.

****

EDITOR'S COLUMN
R. DeLoy Graham

This month we have put together the biggest newsletter since I joined the staff eight or nine months ago. We are receiving more submissions; in fact, we couldn't print them all this month. If yours isn't here, please be patient. You should see it next month. This is a rare occurrence, so don't any of you suppose we no longer seek submissions. Keep them coming!

I want to thank Debbie Billings and Mike Scott for typing articles from other newsletters. Others have volunteered as well. I appreciate your help.

SOLAPAK Version 1.1 arrived in the mail this week. There are several improvements, but the one I like the most is a new program called **COPY2RAM,** which copies user selected files from disk A or B into ramdisk upon bootup. I have set it up on several disks to automatically copy the files and programs I use with whatever application is on the disk. It will even copy out of a folder. Another feature is the ability to adjust the screen saver delay. I must say, Tim Hinkler's programs are used on my system more than any other software.

(continued on page 9)

SPECIAL INTEREST GROUPS
Tom Brown

BUSINESS APPLICATIONS SIG

No meetings until September
Time/Place: call
Leader: Tom Brown Phone: 646-5237
Ron Chaffer 283-5691

PASCAL/MODULA-2 SIG

No meetings until September
Time/Place: call
Leader: Tom Cloyd Phone: 643-9192

ST EXPLORERS SIG

No meetings until September
Time/Place: call
Leader: Richard Barhitte Phone: 206-573-0292

ST FORTH SIG

No meetings until September
Time/Place: call
Leader: Tony Roth Phone: 222-4999

GENERAL ST SIG

Dates: 2nd & 4th Thursdays
Time/Place: 7:00 p.m. / Tektronix, Bldg 50
Leader: Pat Warnshuis Phone: 246-3724

MODEM & COMMUNICATIONS SIG

Dates: 2nd Monday
Time/Place: 7:00 p.m. / Call
Leader: Jerry Anderson Phone: 655-3914

8-BIT EXPLORERS SIG

Dates: 2nd & 3rd Wednesdays
Time/Place: 7:00 p.m. / Call
Leaders: Tom Comerford Phone: 246-4694
Wayne Winterbottom Phone: 669-1367

NEWSLETTER SIG

Leader: R. Deloy Graham Phone: 649-6993

Most SIGs will begin meeting again in September, but times and places were not available at press time. There has been some interest in starting the 8-bit assembly language SIG again. If you are interested, please give me a call. For information on SIG activities, call SIG leaders or Tom Brown.

BOARD MEETING NOTES
Dan Gibson

The July Board Meeting was held at 7 p.m. on July 28th at IB Computers. Attending were the following: Dan Gibson, Steve and Debbie Billings, Jim Berry, Tom Addis, Jim Miller, Tom Brown, DeLoy Graham, Russell Schwartz, Chuck Hall, Jerry Andersen, Elanna Schlichting, Vern Vertrees, and Dean Wagner.

AUGUST MEETING

The August general meeting will begin at 6:30 in our new location at the Northwest Service Center with PAC software sales until 7:00 when the main meeting will start. First off, the Board members will give a brief update on their respective areas. Then the SIG leaders will tell us what each of their groups are doing and when they are meeting. There will be a question and answer period. The giveaway part of the August meeting will feature a free drawing for new Atari Software, both 8-Bit and 16-Bit. Next, Chuck Hall will give us an update on the Children's Fair and Atari Mania. The local stores will have an opportunity to tell us what is new. The meeting will break and you will have the chance to see new software on four systems that will be set up in front.

TREASURER'S REPORT

As of this writing, the balance in our checking account stands at $2,433. At the last meeting we received $97 from software sales and $560 for memberships.

****

MEMBERSHIP NOTES
Jim Miller

I wish to welcome the following new members and families to the PAC.

Gene Miller	Gary Grandt
Creative Computing	Jime Soule
Earl Torango	George Hudetz
Bob DeWeese	Stephen Winters
JoAn Gibson	Albert Spor
Ken Baker	Perry Bailey
Martin Crommie	Andy Lengyel
Chris Hudetz	Software Pipeline
John Kennedy	Timothy Huang
Robert Kanski	George Cass

I'm working on command files for **dBMAN.** I've never done this before and it has been interesting. After being a longtime user, now I'm jumping into the hot water of programming. Ouch! I have written eight command files and about that many pages of programming. Boy! Have I gotten lost several times!

CORRESPONDING WITH ATARI USERS IN OTHER COUNTRIES

Lee Bole, PAC

Well, I sent my friend in New Zealand a working copy of **BIFFDROP** (Antic Magazine). He had spent so many hours typing it, checking the typing, rechecking, and still it would not run. So he finally received my copy which does run, and his comment back to me was: "Thanks for sending **BIFFDROP**. Reckon it's not as good as **ESCAPE FROM EPSILON**, and certainly not worth all the time I spent trying to get the magazine listing running. Damn ANTIC."

The fellow who writes from West Berlin had much to say about the effects of the Tschernobyl nuclear accident. "After the Tschernobyl incident somehow my disk drive wentfunny and by static four of my games got destroyed. Same was happening to two German, 1 Swedish, 3 English and 1 Italian friends of mine." He went on to describe more of the serious damage done in his country, over 1000 miles away from Tschernobyl. Then he remarks: "Of course the Russian, Polish and East German TV reports showed the harvest of spring onions, happy cows chewing grass and geiger counters showing no radiation at all in areas of Kiev/Tschernobyl. No wonder, since the batteries are missing."

From Torino, Italy: "Here in Italy it is impossible to buy original programs. The Atari-Italy does not sell progams, only hardware."

From Rozenburg, Holland: "I'm a member of the Stichting Atari Gebruikers. S.A.G. has 3500 members in Holland, and every 1st Saturday we have a meeting, except July and August." He enclosed the March-April 1986 issue of the S.A.G. newsletter, a fine 28-page paper with articles, listings and display advertisements, all 28 pages in Dutch (or is that German?). I notice the 520ST + complete set (?) is advertised for f3568.

We had sent **VOLCANO** from one of our PAC disks (the one about Mt. St. Helen's eruption) to a man in Preston, England. He replied: "Thanks for the program. I know Oregon well, having flown over it and crashed often in Mt. St. Helen's in **SOLO FLIGHT.**" This man is a member of the "FRIDAY FUN CLUB" who meet for the purpose of writing and playing computer games. Says he: "One of the disks I am enclosing has a game called **FRIDAY FUN MARKET.** This is one I wrote about 9 months ago. We play a 90 minute game almost every week, but I very rarely win. Bill usually manages to send me into bankrupcy. John is the raggiest player I've ever known. His luck is unbelieveable. Me and Ed usually end up strangling John by the end of the game. He is barely alive now."

Our Irish pals coveted Atari tee shirts, so we mailed two that Chuck Hall gave us. Sean proves that young men are about the same all over the world. He writes back from Ireland: "Thanks for the Atari teeshirts. We are going on vacation and we hope to attract some girls with our fancy shirts."

A man in Wroclaw, Poland says: "The Atari 130XE computer and 1050 disk drive have been helping me to run a small agency for the last two months. I am a newcomer and I have chosen this computer because Atari computers are getting very popular in Poland now and one can find them almost everywhere in the world. Some friends advised me to buy the Commodore 64 but I did not like its keyboard and its rather slow disk drive." He too complains about difficulty buying software: "It is rather easy to get (some of) Atari hardware in Poland, but problems may arise when someone needs business or personal productivity software." He reminds me: "By the way, did you know that Jack Tramiel was born in Poland in Warsaw?"

A civil engineer from Mersin,Turkey sends us a typed letter on very formal stationery: "I wish to exchange hints, information and ideas on all phases of computing and wish to swap programs as well."

The following persons are all Atari users eager to do the same.

RAY CHRISTIE (ST)
15 Heather Grove
Greensborough
Victoria, 3088
Australia

CHARLES ROWE (XE)
58 Trowbridge Rd.
Harold Hill, Romford
Essex, RM3 YW
England

LOUIS PIKAAR (ST)
Boeroestraat 8
2905 SK Capelle a/d IJssel
Nederland

MARK REINKE (XE)
Toeplerstrasse 15
D-1000 Berlin 13
West Germany

CPL. VIC WOOD (ST)
EWOSE
RAF Wyton
Huntingdon
Cambridgeshire PE172AE
England

HANS & RONALD WOUTS
Schapendreef 427
3034 ZM Rotterdam
The Netherlands

If any of you members want to correspond with any of them, please get right to it. We know you'll be glad you wrote to them.

SPECIAL PROJECTS
Chuck Hall

We have two very special events coming up in the next few months. The first is the **Childrens Fair.** We will be the only computer club there. This is our first year in attending this show. It is children related with most of the exhibitors having hands on and children involvement displays. I hope to have a string of computers set up running primarily educational software. I am looking for software that is educational and challenging as well as fun. If you have any ideas please let me know.This is a 3 day show, October 3-5. I am going to try something a little different this time. By assigning volunteers to staggered shifts, we can use fewer people and still have three people in the booth at all times. The way this will work is that each volunteer will be assigned a three-hour shift. But only one new person per hour will be coming in. But I can only do this if you call me and volunteer. No experience is necessary. There will always be someone around who can help.

I need to know your name, phone, the day you wish to work, and the approximate time of day you are available. Please call and leave a message, or put your message to me up on the board. I will also have sign up sheets at the next meeting. As soon as I have the schedule prepared I will call you back and confirm your times. If you would like to work the booth more than one day, then please let me know that also. All who work the booth will be allowed in gratis. I encourage you to attend this fair and help make it a success. If you do, please stop by the booth and say hello. 400,000 adult tickets will be distributed through the schools, and another 50,000 will be distributed through McDonald's. I believe general admission is only $2.00, so that shouldn't hurt too bad.

The second event is only one week later, October 11 & 12. This will be the **First Pacific Northwest All-Atari Show.** I will have a second article in this issue explaining what the show is going to consist of, but for now, my need is for volunteers to work this show. If the staggered shift concept works for the Childrens Fair, then I will use it here. Saturday's hours are from 10:00 a.m. to 9:00 p.m., and Sunday from 10:00 a.m. to 6:00 p.m. Again, please give me a call or leave me a message specifying the day and time you can work the club's booth. Atari Corp. will be there with their booth and people. This will be the first chance for many of you to meet and talk with the people who are responsible for what happens with Atari. I don't have a firm commitment yet as to who will be here, but as soon as I know I will let you know.

We may need additional people to help with Atari's booth, or with some of the other booths. Set up for the show will be all day Friday, October 10. I would like to organize a group of volunteers who can spend the day with us and help put up the club's booth, help with Atari where we can, and give assistance to any of the vendors who need help. I know Friday is a hard day to get people, but if you are available, please let me know.

It is very important to our show that we put on a good performance for all concerned. I am really looking forward to this show and I know you are, too. It is going to be a lot of hard work, but it is also going to be a great deal of fun.

If you haven't heard, part of the price for a vendors booth is stock. I will be visiting each booth and selecting a certain value retail of stock, which will then be raffled, auctioned, or sold off at our next few meetings. This will allow us to let you the membership share directly in the proceeds of the show, rather than just knowing that we made enough money to upgrade club equipment, etc. If you have any suggestions or comments about the show please let me know. I will be waiting to hear from all of you. Thanks in advance for all of your help.

Before I leave, I wish to express my thanks to a few people who have been working diligently to make this show a success. These are the people who come to the weekly meetings and help out wherever they can without complaint, (well mostly without complaint). Dave Roberts, Les Nuckols, Mike and Judy Oxborrow, Dan Gibson, Tom Addis, Dean Wagner and Bill Chan. Bill is a new member of our club and has volunteered to coordinate all advertising and promotion. You will probably be hearing from him soon. Elanna Schlichting, Benjamin Brown and Tom Comerford have joined us recently. We had several others at our last meeting, but since it was also a newsletter meeting I will wait to see who keeps coming. It is only through the hard work and efforts of people like this that can pull this show off. As we get closer to the show dates, we will be needing more and more of you to participate. If you wish to help out or you have volunteered and I haven't gotten back to you, please let me or one of the people mentioned above know.

FIRST PACIFIC NORTHWEST ALL-ATARI SHOW "ATARI MANIA"

Chuck Hall

What is "ATARI MANIA"?1) ATARI is the name of a company who produces a line of computer products of the same name. These computers are well known as the best high-quality personal, educational, game and business machines available at a price anyone can afford. Did I say "game" machine. You betcha. Atari always has and continues to build the best game machine the world has seen. I can probably count on one hand those of you who have never played a game on your computer. We aren't looking to change the image, only to enhance the image that the Atari line of computers can do all applications just as well.

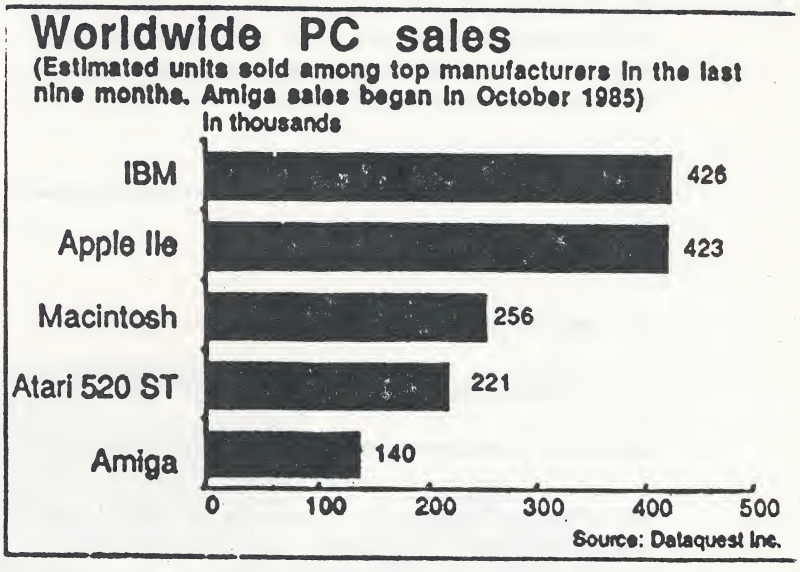
2) MANIA - From Webster, "excitement manifested by mental and physical hyperactivity; elevation of mood." From World Book, "an unusual fondness; craze." For example, a mania for Atari computers.Then what we have is a show with Atari Corp. joining with the Portland Atari Club, to show the world that we are not only excited about our computers and what they can do, but that we want everyone else to catch that excitement also. After all, a club like ours with over 600 family memberships in a city the size of greater Portland and its suburbs, can exist only through the efforts of its members who show great enthusiasm for their computers. Now, that sounds like a Mania to me. Right!

Okay, now on to the show. What does it really mean to you our members. First of all, we will have from 50 - 75 different vendors for you to visit and make purchases from, or just look over their stock and see what is available. We have sent out just over 300 letters inviting different Atari vendors, software houses, and developers to participate. In a show like this, bargains galore can be found. You will find a great deal of competitiveness among the dealers.

Next, Atari Corp., will be there with a booth and several representatives from their company. This will be the first chance for many of you to meet with Atari and see what they are all about. Please don't be timid. Ask them those questions you seem to always have.We will have a club trade/swap/sell area. There will be no additional charge for this activity. Normal club rules apply. There will be a seminar and demonstration area (maybe two) set up. We hope to be able to attract some quality speakers for you.

We will have game contests for our younger members. We will be giving away computers and other items hourly. Many of our dealers will be having drawings and other promotional activities. The club will be selling t-shirts and posters as souvenirs of the First Pacific Northwest All-Atari Show. Be sure to come and get yours early, as there will be limited numbers. We have invited all of the other Atari clubs of which we know about in the Northwest to attend, so you will have a chance to look over their disk libraries and newsletters and just get the chance to meet some of the other clubs in our area.Best Electronics will be back with their huge stock of Atari memorabilia and computer parts. Many of our local dealers will be there. In our next newsletter I hope to have a complete list of vendors and what they will have available. Be sure to mark October 11 & 12 down on your calendar. This will be a must show for those of you who enjoy your Atari computers and other products.

San Francisco Examiner



RAMBLIN...
Chuck Hall

I want to remind you that officer election time is once again approaching. During the October meeting we will open the floor to nominations. I urge you at this time to begin thinking whether you would like to be involved in deciding the direction in which the club goes. You don't have to be nominated to run. Just let a club officer know you want to be placed on the ballot and your name will be added to the list. In November, you will be asked to briefly identify yourself to the club membership and give a short campaign speech. Two or three minutes is all that is necessary. You are also encouraged to prepare a small article for the newsletter to give you the opportunity to get your name and views before all of the membership. The actual election is in December and will be held during the meeting, by secret ballot.

I again remind you that our board meetings are open to the membership and you are most welcome to attend. If you have complaints or comments to make about how the club is run, attend the meeting and voice them, or write to any board member.

At the last meeting Jim Berry estimated that several thousand ST's had been sold in this area. If so, where are these people? How can we get to them and let them know about our club? We need these people and a steady growth pattern for our club to be successful. If you have any ideas on how to help our club grow, or if you think we are doing something wrong, let us know. Don't be bashful. If we don't know what it is you feel we are doing wrong, we can't address it.

IMPORTANT DATES

Newsletter Deadline	September 13, 1986
Board Meeting	September 29, 1986

Next Month: Watch for a review of **TextPro** from Abacus Software for the ST, and our first look at **Kyan Pascal** for the 8-bit Atari computers. This Pascal system looks very complete and professional.

ATARI SIGNS DEAL WITH MICROSOFT For a Version of Word for the ST

[Reprinted from Computer+Software News
by way of the August newsletter
of the Bloomington Atari Systems Enthusiasts]

SUNNYVALE, Calif.---

Atari and Microsoft have signed an OEM agreement that will give Atari the right to market a version of **Microsoft Word** for its ST line of pc's.

Earlier this year, the two firms were reportedly working on a similar agreement under which Atari would be able to make **PC-DOS2.25** and **GW BASIC** available for the ST during the fourth quarter.

Word, which previously was available for Macintosh and IBM only, will be marketed by Atari under the **Microsoft Write** label, according to the computer maker. **Write** is based on the Macintosh version of **Word**.

Aggressive Pricing

A retail price for the new offering has not yet been established however, noted Sig Hartmann, Atari's software division president. "It will be very competitive, I'm sure," he said, adding, "We're committed to aggressive pricing."

Microsoft Write will ship to authorized Atari dealers in the U.S. in Ocober or November, said Hartmann, who also declined to project sales potential for the package. "We haven't gotten that far yet," he said.

Atari has apparently been working to sign such an agreement with a major software company ever since the ST was introduced.

Sources close to the company say it had previously approached both Lotus and Ashton-Tate without success.

Analysts noted that the new agreement will no doubt help lend an air of legitimacy to the ST line.

According to Dataquest figures, which compare the ST to other machines priced under $1,000, the computer currently holds a 2.7% market share in the U.S.

Dataquest projects 1986 sales at 150,000 units in the U.S. and 316,000 worldwide.

Atari declined to discuss the terms of the agreement. "We consider it [the terms] proprietary information," Hartmann said. Microsoft was not available for comment on the matter.

DEALERS CORNER

PAC Help Hotlines

The following people have generously offered to take telephone queries in the areas indicated.

Adventure Games	Russell Schwartz	646-6418
Assembly Language	Leroy Baxter	653-1633
BASIC Programming	Nick Yost	981-0838
	Lee Gassaway	642-2455
BBS Usage	Steve Billings	246-1751
	Don Adams	245-7168
	Russell Schwartz	646-6418
C	Randal Schwartz	626-6907
Cassette Operation	Lee Gassaway	642-2455
DOS Operation	Wayne Winterbottom	669-1367
FORTH Programming	Ron Chaffer	283-5691
	Ricky Wooldridge	224-7163
Operating System	Nick Yost	981-0838
	Leroy Baxter	653-1633
ST General	Chuck Hall	626-3717
ST Fundamentals	Richard Barhitte	206-573-0292

***Computerola**
6224 SE Main (residence)
Portland, OR
239-4315

Computers, Etc.
12145 NE Halsey
Portland, OR 97230
252-0179

Computron
11705 SW Pacific Hwy
Tigard, OR 97223
639-6780

High Tech Toys
12195 SW Canyon Rd (2A)
Beaverton, OR 97005
646-3950

Toys R Us
Jantzen Beach: 289-4691
Tigard: 620-9779
Milwaukie: 659-5163

Computers, Etc.
11504 E. Mill Plain Blvd.
Vancover, WA 98684
(206) 254-5849

***Computron**
1139 SE 11th
Portland, OR 97205
224-2220

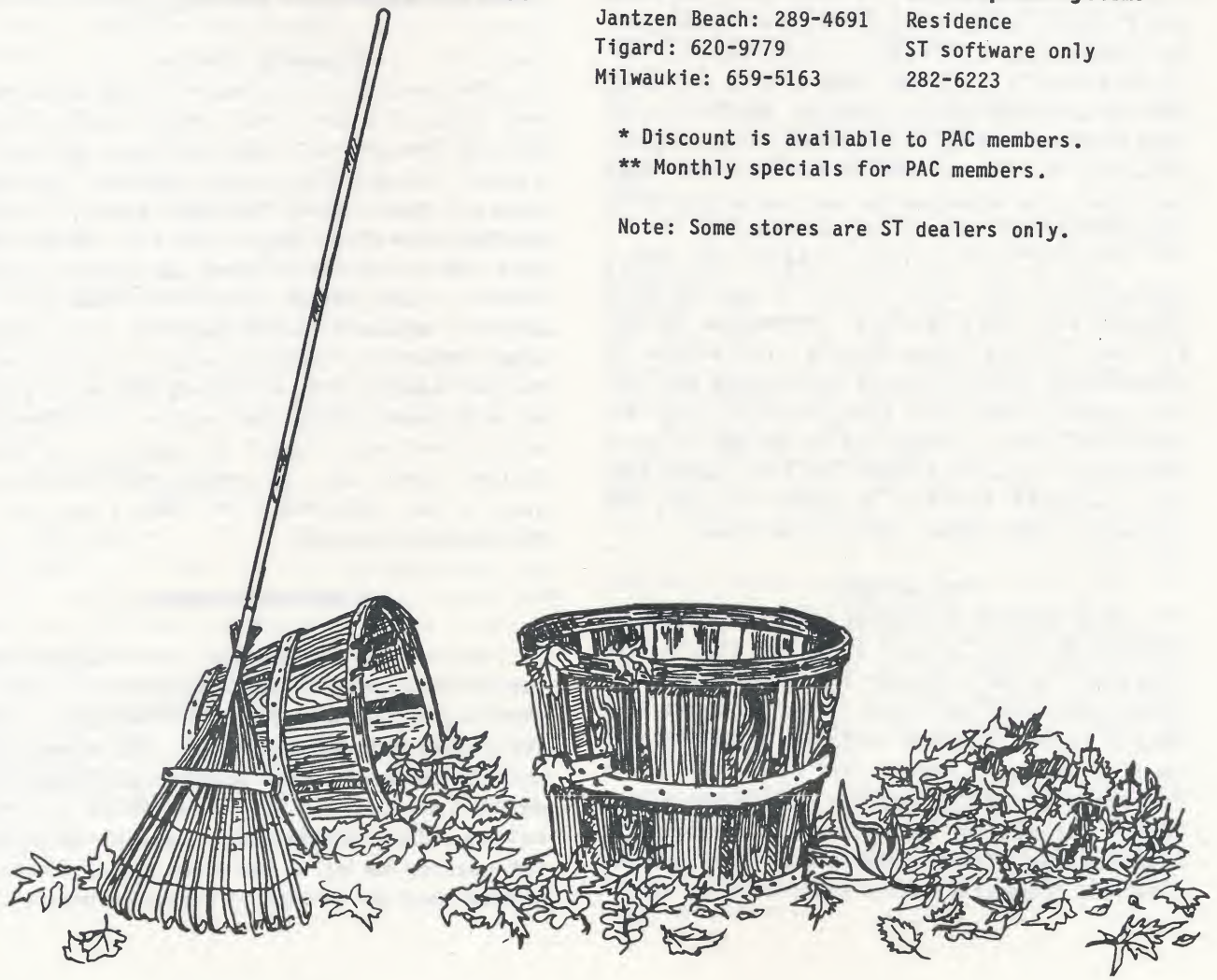
Creative Computers
3275 SW Cedar Hills Blvd
Beaverton, OR 97005
644-1160

****IB Computers**
1519 SW Marlow Ave
Portland, OR 97225
297-8425

WW Telephone Systems
Residence
ST software only
282-6223

* Discount is available to PAC members.
** Monthly specials for PAC members.

Note: Some stores are ST dealers only.



A JOURNEY THROUGH MONITORLAND

Jim Rothrock

Reprinted from the June 1986 ACAOC OrnJuce

People often agonize over what printer they should buy. Does it do graphics? How fast is it? The same goes for disk drives. Monitors, however, usually don't receive as much consideration. Why should they, they're just TV sets without channel selectors, right? Wrong. There are several different kinds of monitors, only some of which may work with your computer. If careful thought is not given when deciding which one to buy, you could end up with a monitor that has a lower quality display than another one which you could have bought, or you might get a monitor that doesn't even work with your computer. A greater knowledge of the various types of monitors available will help you make a good choice.

The picture-forming part of a monitor is a large glass tube called a Cathode Ray Tube (CRT). At the back of the tube are three "electron guns" that "paint" the picture on the screen, which is at the front of the CRT. The three guns represent the three primary colors: red, green, and blue. By combining different brightnesses, or "intensities", of these three colors, any color in the spectrum can be produced. Monitors which only display shades of one color, such as green or amber, are called "monochrome" monitors. They have just one electron gun and can only display various intensities of a single color.

While all monitors share the above characteristics, they differ in how the audio (sound) and video (picture) information is sent to them by the video source. The method of transmission greatly affects audio-video quality. The types of monitors that currently exist are described below, categorized by the way in which information is sent to them. The list begins with the simplest monitor, a normal TV set, and proceeds to RGB analog, the most advanced.

RF Monitors

An RF monitor is another name for a standard television set. It uses a CRT to display the picture, and has a speaker for sound output. The thing that sets this kind of monitor apart from others is the fact that audio and video are sent to it using an RF signal. "RF" stands for "Radio Frequency", meaning that the audio-video signal enters the monitor as radio waves. A television broadcasting station takes audio-video information and converts it into radio waves so it can be transmitted to TV sets without using a cable. The TV then converts the RF signal back into its original form and sends it to the screen and speaker. When using a television with your computer, the computer converts its information into a radio signal just like the broadcasting station does, only the signal is much less powerful. The problem with this method is that it is so indirect. It's like having several people talk at once (the mixed audio and video information), translating their voices into a foreign language (the RF signal), and then having your computer translate them back and separate the person's individual voices. Obviously, things tend to get lost in this process, resulting in degraded sound and picture quality. Some of the newer televisions have additional inputs which bypass the translation of the RF signal and allow a more "pure" signal to be input. When this input is used, the TV is no longer an RF monitor, but one of the other types described below.

Composite Monitors

The next step up in quality from RF monitors are composite monitors. These receive input through **two** channels: one for audio and one for video. In addition, your computer does not convert the signals to radio waves, and the monitor therefore doesn't have to convert them back. This results in sound and picture quality which is much better than that found on an RF monitor. However, while sound is in the purest state possible, video is still in a somewhat "mixed" state. This is because the sound signal is only controlling one device, the speaker, while the video signal is controlling three devices, namely the red, green, and blue electron guns in the CRT. Thus, the video signal can be refined still further.

Chroma-Luma Monitors

Chroma-luma monitors have sound input identical to that of composite monitors, but the video input has been split into **two** inputs. These are called "chroma" and "luma". The chroma input conveys colors from the computer to the monitor, while luma conveys the intensities of those colors. This additional separation of the information making up the video signal creates a picture superior to that of composite monitors.

Monochrome Monitors

Monochrome monitors are actually chroma-luma monitors without the chroma input. The luma input controls the intensity of the CRT's single electron gun, creating a picture on the screen consisting of different intensities of one color, usually green, amber, or gray. Because only one color has to be displayed at a particular point on the screen instead of three, these points can be closer together, resulting in finer detail than is possible on color monitors. There is a trade-off between the sharp images of a monochrome monitor and the color capability of a color monitor.

RGB Digital Monitors

Now we enter the realm of RGB. RGB stands for Red, Green, Blue, the three primary colors discussed earlier. RGB digital monitors have four inputs: one for sound like the previous three types of monitors, and three more for controlling the red, green, and blue electron guns. This type of RGB monitor is called "digital" because each of the guns is either on or off; they cannot display different intensities of their respective colors. Therefore, RGB digital monitors can only display eight colors: black, white, red, green, blue, magenta, cyan, and yellow. These correspond to the eight combinations in which the three guns can be on or off. There is another kind of RGB digital monitor that can display 16 colors. It has a fourth video input which causes the color chosen by the first three to be displayed normally when it is off, but displays the color more brightly when it is on. Eight "normal" colors plus eight "bright" colors result. Again, the increase in separation of video input produces a better picture, but at the expense of the number of colors that can be displayed on the screen.

RGB Analog Monitors

The current state-of-the-art monitor is the RGB analog monitor. It has a sound input and three video inputs like the eight-color RGB digital monitor, but **any** value within a certain range may be sent through the video inputs, not just "on" and "off". The electron guns may emit their colors at any intensity that the computer specifies. Thus, RGB analog monitors combine the signal clarity of RGB digital with the ability to display all the colors in the spectrum, like RF, composite, and chroma-luma monitors do.

It is now obvious that choosing a monitor for your computer is a more complex task than one would think. To avoid a potentially costly mistake, always find out what kind of monitor outputs your computer has: RF, composite, chroma-luma, monochrome, RGB digital, RGB analog, or some combination of these. If you have more than one kind of output, you must then make a cost versus quality judgment. Do you want to pay $400 for RGB analog, or $200 for chroma-luma? Only you can decide which monitor best suits your needs.

****

(**Editor's Column**, continued from page 1)

I just purchased a $49 internal clock for my ST called **Time Source** from Giodata in Redmond, WA. I will tell you more about it next month after I have a chance to install it and try it out. No more setting the time and date everytime I boot!

Another program I will be trying out is **TextPro** from Abacus Software. It is supposed to do multi-column printing and runs entirely in GEM, somewhat similar to **1st Word**, but has some features missing from **1st Word** that I need, such as an easy way to change CPI. More on this next month.

We received an interesting advertisement for a new ST product called the **MaxThink Idea Processor** from MaxThink, 230 Crocker Ave, Piedmont, CA. It is an outline/idea processor for the ST, Mac, and IBM. It is receiving rave reviews and looks like a must-have program. You may call 800-227-1590 for more information.

According to the editors of ACE Newletter in Eugene, "the Mac cartridge appears to be on the near horizon. Latest rumor has it the Smalls have successfully negotiated a deal with Apple. The writing was on the wall. The cartridge was apparently going to appear -- deal or no deal. If no deal, the cartridge would be bare of the Mac ROMs (with instructions on how to go to your local Apple dealer and buy the ROMs). $99 for the bare cartridge, $299 for the complete cartridge. How about a 512K Mac and an Atari ST, both for less than $1000 total!

I attended a computer education conference the first weekend in August. One workshop on CD-ROM did show a video of a search of Grolier's Encyclopedia on both the IBM and the Atari ST. Looks very powerful!

ACTION! IN ACTION

Jim Rothrock

Reprinted from the June 1986 ACAOC OrnJuce

Anyone who has ever seen the graphics on a computer quickly notices a difference between pictures drawn using computer graphics and those shown on broadcast television. On TV, diagonal lines appear smooth, while on a computer they are jagged, often looking like the steps of a staircase. The jagged lines, called "jaggies", give computer generated pictures an unrealistic appearance. Most people think that jaggies don't show up on TV because broadcast television uses higher resolution that computers, but this is not the case. TV actually uses about the same resolution as ANTIC mode E (graphics 7.5) on the 8-bit Ataris. Why, then, do pictures on television appear to have much finer detail? The answer to this question is a phenomenon called "antialiasing".

A diagonal line rises (or falls) at a continuous, or 'analog', rate. This means that every one of the infinite number of points on the line is at a slightly different height than the points next to it. Television screens, however, are 'digital' in nature. A point can lie within a single picture element, called a "pixel", or within an adjacent pixel, but not between them. Thus, when you display a diagonal line (analog) on a TV screen (digital) as in Figure 1, a point on the line will be plotted either in a certain pixel or one next to it, even if the point is almost exactly between the two pixels (pixel (5,2) is an example). This causes an "alias" (i.e. fake, not accurate) line to be drawn.

Alias lines can be overcome to a great extent by a technique called "antialiasing". Antialiasing is based on the fact that a line being drawn on the screen passes through the intermediate space between one pixel and another. The line will cover the entire pixel at each end of the line, and various fractions of the pixels lying in between. If the color of the line is white and the background color is black, a pixel which is half covered by the line, such as pixel (6,2) in figure 2, would be half black and half white: gray. The endpoints, which are completely covered, would be white, and pixels which are not covered by the line at all would be black. The same is true for color. A pixel half covered by a green line on a red background would be yellow (half green and half red).

Pictures seen on television are naturally antialiased. A TV camera has a matrix of pixels like a TV set does, except that they 'receive' light and emit an electronic signal rather than the other way around. When the camera lens focuses a diagonal line onto the matrix, it will cover some pixels totally, some not at all, and others will be covered various amounts in between. Higher degrees of coverage will produce stronger electrical signals, resulting in brighter pixels on your TV set. The human eye works approximately the same way, with the retina of the eye substituting for the matrix of pixels.

Now that the concept of antialiasing has been made clear, I can explain its relevance to computer graphics. By using programming algorithms, antialiasing can be applied to pictures drawn on your computer. The program at the end of this article gives an example of this. The program draws a jagged line in the upper half of the screen and an antialiased line in the lower half. Although both lines have equal length, width, and slope, the bottom line seems much smoother than the upper one. The brevity of the program shows how simple antialiasing really is.

Unfortunately, the use of antialiasing on the Atari 8-bit computers is rather limited due to restrictions on the number of colors which may be displayed on a single scan line and the limited number of colors available. (Yes, 128 colors is limited). However, it can be implemented much more fully on Amigas and STs. I think the main reason antialiasing isn't used more often is that people simply don't know about it. I hope I have convinced those of you doing graphics programming to use antialiasing wherever possible. The results are truly impressive.

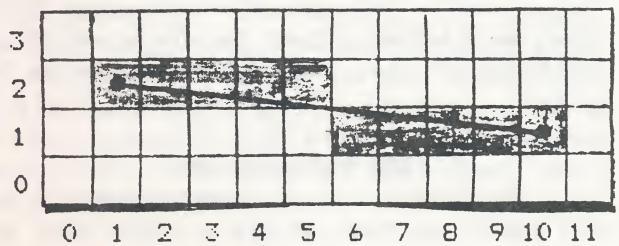


Figure 1

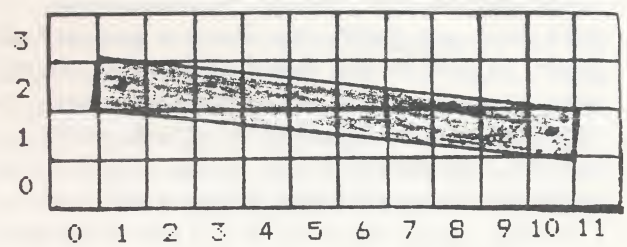


Figure 2

```
;Antialiasing Demonstration
;by Jim Rothrock, ACAOC OrnJuce

PROC init()
Graphics(9)
SetColor(4,12,0)
Close(1)
Open(1,"K",4)
RETURN

;draw jagged line

PROC line(BYTE width,y)
BYTE ctr,ctr2,y2

color=15
FOR ctr=y TO y+width
DO
 y2=ctr
 FOR ctr2=0 TO 4
 DO
  Plot(ctr2*14+5,y2)
  Drawto(ctr2*14+18,y2)
  y2==+1
 OD
OD
RETURN

;draw antialiased line edge

PROC edge(BYTE start,end,direc,y)
BYTE x,ctr,ctr2

x=5
FOR ctr=y TO y+4
DO
 ctr2=start
 DO
  color=ctr2
  Plot(x,ctr)
  x==+1
  IF ctr2=end THEN
   EXIT
  FI
  ctr2==+direc
 OD
OD
RETURN

PROC main()
init()
line(9,49)
edge(14,1,-1,127)
line(8,128)
edge(1,14,1,137)
Getd(1)
RETURN
```

ASK UNCLE SLOOP

Reprinted from the April PAUCUS Newsletter

Dear Uncle Sloop,
On an ATARI 800XL, what is the best way to disable the BASIC?

Idiot

Dear Idiot,
Kick it in the leg, HARD.

Uncle Sloop

Dear Uncle Sloop,
A friend and I are having a disagreement on what brand of computer is the fastest. Could you settle this for us?

Speed Demon

Dear Speed,
In actuality, all computers are the same speed. Galileo proved this when he took several brands of computers to the top of the Tower of Pisa and dropped them off at the same time. All the computers hit the ground together. Except the Commodore 64, which got lost on the way down.

Uncle Sloop

Dear Uncle Sloop,
When I try to load a certain program, I keep getting a message saying "BOOT ERROR". What does this mean?

Moron

Dear Moron,
You got your foot on the power cord.

Uncle Sloop

Dear Uncle Sloop,
What is the difference between ROM and RAM?

Confused

Dear Confused,
ROM is Read Only Memory. It is "locked" into the chips, and will not be lost when you turn off your computer. RAM is a male sheep, and has nothing to do with computers. Ewe should know that.

Uncle Sloop

(continued on page 15)

REVIEW OF STKEY: "Programmable Function Key Support"
(from Shanner International Corp. - $20)
Tom Cloyd, PAC

The function keys at the top of the ST keyboard are not always used by applications programs. They are a programming design resource that now can be used with programs that make no explicit provision for them, thanks to **STKey**, which loads at boot-up time as a memory-resident program. With it, you have the option of defining your computer's functions keys, or redefining them. You may do this at any time you are allowed to make keyboard entries, before or during an application program, as long as a GEM menu line is on the screen.

Once you have defined what you wish a function key to mean, you may use these definitions as long as keyboard access and a GEM menu line are available. An **STKey** menu may be created, describing the keys you have created (this serves as a label only, not an enumeration of the keystrokes the function key has been assigned), and this menu may be called up and/or re-written at any
time. Flexibility is an essential characteristic of this program.

Key definition is initiated by pressing the [Alternate] key, followed by a function key (with or without the [Shift] key). Keystrokes immediately following are stored, and become the new function key definition when the [Alternate] key is pressed once more. This makes possible a maximum of 20 definitions at one time. Audible signals mark the beginning and end of the definition process.

Be careful here--if you wish to repeat a keystroke several times in creating a function key definition, do NOT use the automatic repeat feature of the ST keyboard. It seems that **STKey** cannot keep up with the high-speed input, and will not get all of the characters. Be careful also to formally terminate the definition process. It is easy to neglect this, and accidentally tack onto the end of your definition a number of keystrokes you do not want. I did this a few times, and created some rather puzzling function key definitions! But it is easy to remove a definition: just re-initiate the definition process, then end it immediately, and the function key is returned to its former meaning.

A set of definitions may use a combined total of 2000 keystrokes, and you can use the set continuously during a work session, as you move into and out of multiple application programs. Wishing to use it again, you may save it to a disk file, which can be reloaded later. This gives you extraordinary flexibility. You can have multiple function key definition sets, each with a menu, all of which can be saved on disk, then reloaded into memory for use with any program. The on-demand loading and saving of definitions may only be done within a GEM environment, since one must have access to a menu line, but USE of the definition set is not so limited.

There are limits, however, to what this program can do. You may not define a function key and then use that defined key in another key's definition. Further, it might be awfully nice to have **STKey**'s power extended to more than just the function keys, though this extension would not be without its overhead costs and risk of considerable confusion, if the keyboard definition and/or re-definition were overdone by the use. This proposed extension to the present program could have a bail-out feature - some easy way to cancel all user-generated definitions, in case you got in over your head.

There is also an inherent problem with this program on the ST. GEM programs other than text editors, word processors, and data base manipulators usually require minimal keyboard interaction. This aspect is a major design goal of GEM, and the ST is committed to the graphics interface concept. **STKey** is most useful in an environment such as the old CPM system - a text-only user interface. Still, with text and data-manipulation programs it feels nice to have **STKey** on board, and unexpected uses pop up for it quickly.

At $20, this program is reasonably priced, well-documented, bug-free, easy to load, get running, and use, and is about as open to your individual creativity as can be imagined. I'm glad I bought it.

CAD 3D
A Review
Steve Billings, PAC

This program is great for those who have even the smallest artistic bone in their body and have some patience. The name of the program is somewhat belying. **CAD 3D** is not so much a designer's tool as it is a graphic arts tool. There is no provision for dimensioning or scaling an object, so it cannot provide much engineering information. It will create very interesting three-dimensional images in framework or solid-looking perspective that can be incorporated into other common drawing programs such as **Neochrome** and **Degas.**

The **CAD 3D** software was created exclusively for the Atari ST and uses GEM effectively. You are presented with four windows that give different views of the objects you have created. All options are available in drop down menus. The mouse is used extensively for input.

This program is being distributed by Antic in their magazine and at your friendly Atari dealer near you. The program was written by Tom Hudson who also was the creator of the drawing program named **Degas.** Tom Hudson has become a big name in Atari graphics programming. He has written recent articles in Antic about fractal images also. The price of the program is hovering around $49.95, which puts it in the low end of my "do I really need this program?" range. If you are into ST graphics this software is fun. If you are trying to design a new solid fuel rocket or better mousetrap this program will be of little practical help.

Fortunately, Antic deemed it fit to actually print the documentation for **CAD 3D** on paper. I have bought other Antic software where all the documentation was on disk and it proved a real hassle to print it out and keep track of it when it was needed. It is so much nicer to have a printed document that has helpful pictures and diagrams. The documentation covers the program fairly well.

CAD 3D is not an easy program to come to terms with. It will take some practice to be able to achieve your goal. At first it is easy to become quite confused and disoriented because of the many options and features, besides the difficulty of thinking in three dimensions. Basically, there are two tools to work with in creating three-dimensional representations: Spin and Extrude. Spin allows you to draw a two-dimensional cross section of an object and then rotate it on a vertical axis to make it three dimensional. This works great for making symmetrical objects like flower vases, wine glasses, doughnuts, or bowling pins. Extrude is for creating non-symmetrical objects. Once you draw an outline of a shape, the extrude function builds it up in layers to make a thicker version. this tool works well for shapes like 3D letters, steel I beams, teacup handles, etc.

Once objects have been created you can change the sizes in any dimension or combine them together to create new shapes. This is where you need the patience I mentioned earlier. If the objects are very complex and you attempt to attach them, or create an object that is the overlap of the objects, the process can be very slow. In attempting to attach a fancy handle onto a strange shaped cup it took the program approximately an hour to figure out the vectors of the new shape and the result was not what I had intended. Instead of combining the shapes I ended up with sort of a combination of one object minus the overlap of the other object.

Another problem was the program's responding that the objects I had created were too complex for it to calculate the merger or that I was out of memory. There seemed to be a problem with the program freeing up memory. If a number of objects were created and then deleted, the memory did not seem to be reallocated and adding more objects would lead to an alert window message that said "not enough memory". It took a little creative messing around to overcome these bugs. I found that if I created and combined objects in a certain order and then merged them on disk I could get more complex arrangements that would not run up against the limits of the program. This trial and error construction can be a bit time consuming when it takes so long to combine the objects.

I was quite happy with the results when I achieved them. The objects can be rotated, stretched, look at from different views, and under different lighting effects. The objects are very 3D looking, although a little bit blocky due to the finite number of color gradation and faceting. The program was fairly easy to use once I learned how to work it, although I certainly have not mastered it yet. It takes quite a bit of practice and care to get the result you are after. In the development windows small objects can turn into nondescript smudges that are hard to manipulate easily.

(continued on page 17)

REVIEW OF THUNDER: "The Writer's Assistant"

(from Batteries Included - $30)

Tom Cloyd, PAC

This is the program that doth make fools of us all, as it were. In exhange for a little embarrassment, rendered in the privacy of your own home, you will be made to look smarter than you really are, at least in the eyes of others. The monetary cost to you is small, and the documentation you receive is excellent, although they really should have run their manual through their own program to check its spelling before publication. That, of course, is what **Thunder** does -- it checks spelling in a text file. It operates with "any well-written GEM application," as long as a menu line is available during program execution. At the moment, this means that I use it for **1st Word** and nothing else, though this limitation matters little to me and will surely diminish as more GEM programs are put on the market. For now, it is gratifying to be able to use **Thunder** at all.

Thunder operates in either stand-alone or concurrent mode. This means that I can run my already-existing text files through it, operating it in stand-alone mode, then can at any time continue working on those files not yet finished and have **Thunder** monitor my spelling as I type in new text.

It works by referencing three dictionaries. The first is a 50,000 word main dictionary, in which the words are stored in a special manner so that they are accessible very quickly. This is where the real **Thunder** of this program resides, for this specially constructed dictionary makes possible a real-time spelling checker that has to be the ultimate in software utility.

The second dictionary is a supplementary one, and there is no limit to the number of supplementary dictionaries you may create, although only one can be accessed at any one time. Creation of these dictionaries may be either dynamic - as you go along - or prior to execution of **Thunder**.

The third dictionary appeared to me initially to be less than useful, until I realized that to a degree it provided the one major amendment which I wished **STKey** possessed (see previous review): the ability to program the entire keyboard. This "learn" dictionary, so-called because it is empty until you teach it what to recognize, is a dictionary of substitutions. If you habitually misspell certain words and don't want to have **Thunder** catching you constantly, you enter in this dictionary the misspelling and as soon as you key it into your text **Thunder** will substitute the correct spelling you also gave it. Better than this, individual ASCII characters or strings can be made to behave as mnemonics, for which **Thunder** is to substitute the full text you give it. Having **Thunder** run on top of a text editor allows source language tokens and reserved words to be entered in an abbreviated form, and they will appear in the text in full length. Like the other dictionaries, this one may be created dynamically or prior to execution, and is subject to the limitation that **Thunder** must not have any of the abbreviations you want it to recognize in its other dictionaries.

I have little doubt that for the user who has little experience with computers, **Thunder** could be frustrating because of minor complexities involved in setting it up. There are various ways of using it, a number of different files to figure out and many ways to fail in getting it all going. This derives from the program's versatility. I am an experienced user and it still took me several days and a lot of trial usage to get it working to my satisfaction, at which point I was extremely pleased with it. I am afraid that powerful programs are like complex cameras (or computers!) -- they produce wonderful results in the hands of a knowing operator, and if you are not such a person, you will have some learning ahead of you.

Hints on How to Begin

So here is an easy way to get it going: Start with a freshly formatted disk. Copy to it these files from your usual system disk: \desktop.inf\, \control.acc\, and any date-and-time setup routine you use (**Thunder** comes with a nice one). **Thunder**'s documentation advises, and I generally agree, that it is best to have no other desk accessories on your system when operating **Thunder**. However, because I like to use **STKey** while word processing, I auto-load it when booting up and have had no problems. I also use the **SOLAPAK** resident ramdisk routine, to set up a small, 30K ramdisk, and have had no trouble with this. The main difficulty seems to be memory, for **Thunder**'s dictionaries are memory-resident, and so are word-processors. A 520ST can run out of memory quickly, but 1-meg machines may have no problem at all with additional accessories.

Next, install **Thunder** as its documentation instructs you. I advise installing the concurrent (accessory) version to automatically load your supplementary dictionary at least, because once you load in your word processor you cannot have the supplementary dictionary loaded on demand without going back to your boot-up disk to get it. You could also just put it on your word processing disk, which would be the way to go if you used multiple supplementary dictionaries that might have to be accessed on-demand.

This new system disk you have now created will be specifically for word processing, and operating this way has proved by far the most simple for me so far. Remember that should you call up **Thunder**'s options box and change anything, **Thunder** will save this information immediately on the resident disk. You will likely do this while within your word processor, and the resulting file (tagged ".CNF") should be manually copied back to your word processing system disk, if you want this information to be used the next time you boot-up and auto-load **Thunder**. Forgetting to do this is a mistake you are virtually guaranteed to make a few times!

Like all programs, **Thunder** has its quirks. For example, if you go back to a word in a text and change it in some way, **Thunder** will only read the changes you entered, not the whole new word. It has the same problem with words whose misspelling you catch and correct yourself, if you move the cursor back to make the correction using any means other than the backspace key.

You will notice a small decrease in the speed with which text you type is posted to your monitor, due to the concurrent operation of **Thunder**, but it is not much, and I could easily live with it.

There is some indication that it is unwise to select the "bold", "underline", "italic", or "light" function keys available in **1st Word**, for **Thunder** apparently fails to respond correctly to certain control bytes which **1st Word** will then insert in the text file, resulting in loss of text.

Finally, there is a major bug in the program which is easy to manage and avoid: If you load files into your word processor from a disk of text files, and save it back to the same disk, some of the files on that disk will somehow at various time have their tail ends cut off! This seems to happen when you use either the stand-alone or concurrent versions of **Thunder**. I lost chunks of several files, until I started loading the file I wanted to work into a ramdisk before using **Thunder**, to isolate the other text files on my disk from **Thunder**. Loading this file into and saving it from my word processor using only a ramdisk, I have had no more trashed files, and of course program execution has become faster.

This and other surprises are minor. **Thunder** comes from Batteries Included, the company to which Antic Magazine recently gave their 1986 Outstanding Achievement award, and while I haven't written the company yet, I'm sure that they will fix any problems this outstanding program may have, and will make good their customers' investment. As presently offered to the public, the program is undeniably usable, useful, and gratifying. Either as a real-time or stand-alone spelling checker, **Thunder** performs brilliantly. If you write, you need it, now.

****

(**Ask Uncle Sloop**, continued from page 11)

Dear Uncle Sloop,
Is there a cheap way to get double density from a 1050 disk drive?

Cheapskate

Dear Cheapy,
Sure. The cheapest way to produce double density with a 1050 is to simply put two disks in at the same time. The drive won't work, but it'll show that YOU are doubly dense.

Uncle Sloop

Dear Uncle Sloop,
Do people really send you these letters, or do you just make them up?

Wondering

Dear Wondering,
Yes.

Uncle Sloop

dBMAN: A RELATIONAL DATABASE FOR THE ST

Tim Ekdom
Downloaded from CompuServe

dBMAN is an Atari translation of a **dBase III**-like database program on the IBM PC, published by VersaSoft. **dBMAN** is not an exact clone of **dBase III**, but if you are familiar with **dBase III**, you should be able to jump right into **dBMAN** with no problems. Many of its commands and syntax are identical and its capabilities are similar.

For those not familiar with **dBase III**, **dBMAN** is a relational database. This means multiple databases may be in use at the same time and information in one database may be linked to information in another database. (Of course, it can also be used for simple "index file" databases.) **dBMAN** is a totally command-driven system. It has no menus. This means you enter commands interactively, just like BASIC. This is more of a challenge for the new user, but ultimately provides much more power and flexibility. In **dBMAN**'s interactive mode, the top five lines of the screen are reserved for your commands, system messages, and control-key prompts. The rest of the screen is reserved for data display. This is much nicer than **dBase III**'s scrolling dot prompt. The prompt line displays a selection of the appropriate control keys to press, depending on the current operation. You can write your own custom application programs by entering commands and functions from **dBMAN**'s programming language into a command file which **dBMAN** executes just like BASIC. These command files can be debugged and edited interactively, after a fashion, though not so easily as BASIC. Command files can be run by just entering the name of the file at the TOS-Takes-Parameters dialog box. (Or don't enter anything to just start **dBMAN**.) Although **dBMAN** uses its own format for its database files, in can export to and import from text files in either fixed length or delimited formats.

I have not used **dBMAN** with any large databases, so cannot report with authority on its performance. Sorting does appear to be slow; probably because it sorts by writing the sorted data to a new file. This would be much faster on a hard disk. Also, if you maintain a large database that has frequent adds, changes, and deletes, you'd probably be better setting up an index file so you don't have to sort the whole database. Indexing is much faster. With regard to command files, **dBMAN**'s performance appears to be roughly on a par with BASIC. DO procedures have to be in separate command files, slowing things down as the procedure file is read. This, too, would work better with a hard disk.

There are a few quirks. The only thing I've found that may be an outright bug happens only when using the monochrome monitor. At times, parts of the control-key prompt line disappear and can only be restored by re-booting. This seems to be a timing problem between pressing certains keys in rapid sequence while that portion of the screen is being re-drawn. In any case, it's only annoying and doesn't affect operation. Another problem involves syntax errors in IF/ENDIF statements in command files. If there is a syntax error in a statement within the IF/ENDIF, the interpreter seems to get lost and gets stuck in an error message loop. If the outside ENDIF is missing, it crashes. Also, if you are single-stepping through a command file in debugging mode, IF statements don't branch properly. Finally, **dBMAN** will not work with a RAM disk installed. If one is, you get kicked back to the desktop. **dBMAN** likes to use a lot of memory. You must have TOS is ROM. You may have limits on how large your desk accessories can be. (Sorry, you can't use them from withing **dBMAN**. This is not a GEM application.)

dBMAN is probably the most powerful and flexible database available for the ST today. (There is another **dBase III** clone advertised--**Holmes and Duckworth Base**, but word on CompuServe is that Mirage Concepts has gone out of business.) **dBMAN** does need study and practice to become easy to use. VersaSoft provides support, but asks for a fee of $25. The program disk is not copy-protected. The license agreement permits five copies to be used on a single computer. On-line help messages and command-key summaries are available with the appropriate files on disk. The manual is thick, but has to cover so much ground that it is somewhat cryptic. (I needed to buy a dBase III book to figure out how to create a report format file.) The tutorial in the manual
covers only the simplest operations. (There is a disk tutorial that covers roughly the same ground.) But for the price, $150 list, it compares point for point with $500 programs on the IBM PC.

VIP PROFESSIONAL TIPS

Richard Calkins
Reprinted from the June 1986 ACAOC OrnJuce

This powerful and useful program is so important as to warrant continued attention. I'll leave a complete review to the pros. Let's concentrate here on some useful tips for the user, and news for present and potential owners.

A very necessary command for printer operation is buried in a separate chapter from "Print Commands" in the manual. The auto linefeed printing command is /WGDPAY (see page 143). To save this change, put the program disk into the drive and type /WGDU.

Printing difficulties can be eliminated by setting the margins to 0 and 80, respectively. This will allow 78 letter columns and should prevent double spacing problems. The SUM TOTAL of spreadsheet column widths in your print range should not exceed 78. (Keep the 78 maximum in mind if other margin settings are desired.) Be sure to save margin default changes to the program disk with /WGDU if you want to use them as your standard. SPECIAL NOTE: you must save your margin changes with your worksheet if you want to use them again. When you reload the worksheet, do not despair that the margins have apparently changed. For some reason, they are listed as the original, but when you print your worksheet it will be done correctly.

With TOS in ROM, placing the VIP disk in the drive when turning on your ST will yield 108K of usable memory -- taking 43 seconds to load. This is a significant jump from the 52K available if you turn on your ST with no disk installed! (If you go all the way to the GEM desktop, settle for the least amount of usable memory. However, the 1040ST or 1 meg 520ST upgrade is supposed to make over 500K available.)

Replication and calculation (simultaneous) across a range is considerably faster if the default is changed to rowwise from natural. Type /WGRR. For comparison: in one replication (using /C) covering 200 cells, natural recalc took over four minutes. Using rowwise recalc lowered that to one minute, ten seconds.

CAVEAT: a significant comparison for those who hope that their ST and VIP will provide abundant usable memory: the same data and calculations which used 17K in Visicalc on my 800XL took 54K with VIP.

NEWS

The latest upgrade is dated Feb. 25th. Your dealer may not have it unless someone asks VIP to send it UPS. This upgrade is necessary to create print files and install default printer default changes in the program as noted above.

Those who purchased early versions of VIP and then received upgrades have discovered that disk data has been irretrievably lost. The newer version cannot load data previously saved with the original version. [PAC Editor's note: save those old files as WKS instead of NAT files, then load them into the new version and save them back out in NAT mode. Nothing is lost!]

VIP owners (registered) will receive the GEM version when it becomes available at no cost. (It was to have cost an additional $20 previously.) There is now a "Lite" version of VIP Professional, without macro capabilities and database functions. This has a $100 list price, compared to the $180 list price of the full-featured version.

****

(**CAD 3D**, continued from page 13)

Also on the disk is an animation program. If you create a series of **CAD 3D** images with slight variations, you can save them as animation files. The animation program then flashes them on the screen in rapid succession creating an animated show.

I have worked with **CAD 3D** for a while and have created a couple of images. Now if I can just find a picture dump program for the ST that will do the 3D pictures justice, you will be seeing them on the cover of this newsletter.

STRICKS

Mike Fulton

Reprinted from the June 1986 ACAOC OrnJuce

Those of you who struggle with **ST BASIC**'s program editor should know that there is an alternative. An **ST BASIC** program is saved on disk as a normal ASCII file, which means that you can, if you want, use your favorite text editor or word processor to write your **ST BASIC** programs. As long as you save the file in ASCII form, **ST BASIC** can read in the program without any problem at all.

Ok, gather 'round and I'll tell ya how to do it. Most ST owners have the **1st Word** word processor, so we'll use this as our example. Ok, load the **1st Word** program. Done? Ok. When it asks you for the name of the file to edit, enter either a new name for a new program, or the name of a program on disk. **1st Word** will now load the file. For our example, we'll enter the program listing at the end of the column. Enter "LNNUMBER.BAS" for the filename. In the "Edit" menu, **1st Word** has the choice "WP Mode" which will be checked when you start with a new file. Go up to the menu and click on this choice. This takes **1st Word** out of word processing mode and puts it into text editor mode. Done that? Ok, now go ahead and enter the program listing.

ST BASIC requires line numbers. Now, you could enter these in the text editor, like the rest of the program. But one nice feature of **ST BASIC** is the ability to give a line a label, and access lines with their labels instead of with their line numbers. It's best to avoid using line numbers, since it makes the program easier to modify in the future. If you don't know about using labels, consult your **ST BASIC** manual, in the section about "Special Features."

To make it easier to avoid using line numbers, I've written a program which will add them to a file for you. This way, you can write your program without line numbers, and then add them later. The program will ask for a filename of a BASIC program which you have entered using a text editor without line numbers. Then it will ask for another filename. This is for a new file the program will create. It will take each line of the first file, add a line number to it, and then put it into the new file. This file can now be loaded and used by **ST BASIC**. A warning: to keep it short, I did not include much error checking for the files. So make sure that you give it good filenames!

Notice that I break one of my own rules in line 110. This is because **ST BASIC** will not allow a label to be used with ON ERROR GOTO statement. Therefore, you have to use a line number. What I like to do is put a label on the line anyway, and then change the ON ERROR GOTO statements after this program adds the line numbers. For example, originally, I'd written ON ERROR GOTO TRAP in line 110. After adding line numbers, I just replaced "TRAP" with "200" and then it works fine. The ON ERROR GOTO statement doesn't pop up very often, so this isn't much trouble.

```
10 'LNNUMBER.BAS - Adds line numbers to file.
20 Dim ln$(200):Lnum=10
30 FullW 2:ClearW2:GotoXY0,0
40 Print "What is the input file: ";
50 Input file1$
60 Print "What is the output file: ";
70 Input file2$
80 '
90 Open "I",#2,file1$
100 Open "O",#3,file2$
110 On Error Goto 200
120 While 1
130 Line Input #2,ln$
140 Print #3,lnum;" ";
150 Print "Now doing line #";lnum
160 Print #3,ln$
170 lnum=lnum+10
180 Wend
190 '
200 Trap:'Error routine for end-of-file
210 If (err<>62) AND (err<>0) Then Print "Disk
Error!"
220 If(err=62) OR (err=0) Then Print "All done!"
230 Close : End : 'This the end, beautiful
friends...
```

ST BASIC

Chuck Hall, PAC

I don't have a program for you this month, but I havehad one answer so far to my challenge. If you looked at the BASIC program and article I had in the July newsletter, you will remember a challenge I issued to other programmers to write the same program in another language. George Hudetz did just that. Accompanying this article is his program in Pascal. If you thought you might like to learn Pascal, compare this program with the BASIC program I wrote and see if you can find the similarities. Most languages have certain things in common that are fairly easy to figure out once you learn the proper syntax.I thank George for his efforts. He next plans to add GEM to the program and we will be happy to print his enhancements here. I actually thought the program was a fairly simple one, but I guess those who program in C, Forth, Logo, Modula-2, and assembler just feel that their languages aren't capable of doing it. (Heh, heh, heh! Get my drift?)

Now back to BASIC. I have been playing with a new BASIC called **Softworks BASIC.** And I have to tell you I am impressed. The concept behind this version of BASIC is much different than most of you have been exposed to in the past. Those of you who are professional programmers or who have programmed intensively, should appreciate the advantages in **Softworks**. All variables can be mapped. This means you declare all of your variables names, sizes, and formats at the beginning of your program. You can add any new variables as you continue to program, but you map them at the beginning of the code. You never need to hunt through your program to find where you might have defined a variable or if you have used a certain name.

You also have **all** GEM functions available to you. This includes all of the BIOS calls, VDI, and AES functions. There is a simple command in Softworks that lets you call any of these functions easily. For example:

toolbox,Cconin,CHAR

accepts any character from the keyboard and echoes it to the screen. Other GEM calls will let you get the character from the keyboard and determine what it is before you echo it to the screen. The primary keyword here is 'toolbox'; Cconin is the GEM call, and CHAR is the variable where the character from the keyboard is stored. The variable CHAR is mapped as:

MAP1 CHAR,S,1

MAP1 is the BASIC command, CHAR is the variable name, S is for String, and 1 is the length of the data.You also have a command called 'Print Using'. This allows you to completely format any print line before sending it to the printer. It allows you to insert currency signs, commas, periods, spaces, special characters, and many other functions automatically. One thing you have to get used to is that you do not have an LPRINT command. You must open a file on disk, then route that file to the printer after you end your program. DeLoy Graham says that we can develop a small assembly language program that can be called from this BASIC program (through the command XCALL) to send our print to the printer directly. Should be a good utility. Since I am so enthusiastic about this version of BASIC, I hope to use it to give an example of every GEM, BIOS, VDI and AES call.

There are a couple of drawbacks to the language. It is spendy--about $80 retail. Also, it must use its own runtime module to execute a program. No big thing really. Very simple to do. The documentation also leaves a lot to be desired. Hopefully this will be corrected in the future. If not, by the time I try all of the functions and write them up here, we will have pretty good documentation.

Softworks BASIC is compiled. It is faster than any other BASIC I have ever seen. It is also very clean and easy to work with. If you can afford it, and are enthusiastic about a higher level BASIC than what we have been exposed to before, then I highly recommend the product. Next month I will have some example routines for you to look over and try.I am attempting to start a new ST BASIC SIG. If you are interested let me or Tom Brown know. Location and times will be announced later after everyone has had a chance to provide input.

DAY OF THE WEEK: Pascal Version

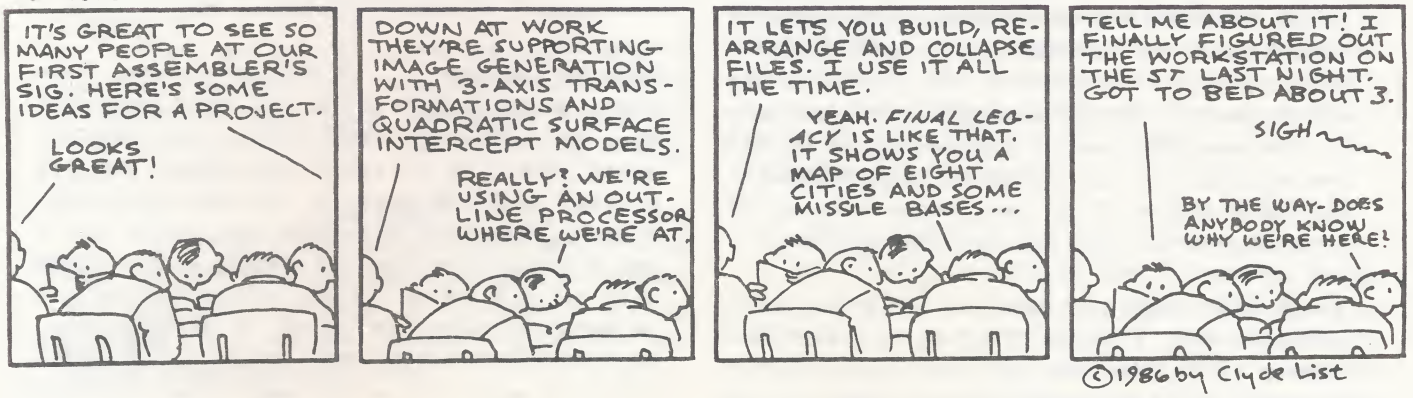
George Hudetz, PAC

Editor's Note: This Pascal program was submitted to the PAC newsletter in response to Chuck Hall's challenge for other programmers to rewrite his **Day of the Week** program in another programming language. Take the time to compare this code with that written by Chuck in our July issue, page 17.

```
program date;

{    This program gives the day of the week for any correct input date.

                              By George Hudetz, 7/26/86
                                 Portland Atari Club                    }

var
  answer            :char; {answer to continue prompt}
  date              :integer; {numeric representation of the weekday}
  test              :boolean; {flag for good/bad date}


procedure bad_date;

begin
   writeln;
   writeln('Bad data somewhere.....');
   writeln('You will have to try again.');
   writeln;
end; {of procedure bad_date}


function get_date : integer;

var
  year,day,month,weekday   :integer;

begin {of function get_data}
   writeln;
   writeln('Enter date MM/DD/YYYY');
   writeln;
   readln(month,day,year);
   if (month>12) or (month<1) or (day<1) or (day>31) or (year<1) then
      begin
         test :=false;
         bad_date;          {bad date; (nicely) tell user}
      end {of bad date}
   else
      begin                 { good date, figure out weekday}
         test :=true;
         weekday :=day+2*month+trunc(0.6*(month+1))+year+trunc(year/4);
         weekday :=weekday-trunc(year/100)+trunc(year/400)+2;
         weekday :=weekday mod 7;
         get_date :=weekday;
      end; {of good date}
end; {of function get_data}
```

```
procedure find_day(date : integer);
begin
   writeln;
   write('Date falls on a ');
   case date of
      Ø  :writeln(' Saturday');
      1  :writeln(' Sunday');
      2  :writeln(' Monday');
      3  :writeln(' Tuesday');
      4  :writeln(' Wednesday');
      5  :writeln(' Thursday');
      6  :writeln(' Friday');
      otherwise : writeln(' Out of range..');
   end; {of case date}
   writeln;
end; {of procedure find_day}


begin {of main program}
   repeat
      date := get_date;
      if test then
      begin
        find_day(date);
      end;
      writeln('Would you like to try another? (y/n) : ');
      readln(answer);
   until (answer = 'n') or (answer = 'N')
end. {of main program}
```

BUZZ



TINY THRILLERS
From CURRENT NOTES

[An excerpt from the June and July issues of Current Notes.]

We seek to generate both an audience and an authorship for "tender tips," or as we call them, "Tiny Thrillers" about the mighty-mite ST electronic space craft. This is not to usurp John Demar of QMI, PO Box 179, Liverpool, NY, who has done a piece available on the BBS circuit. Rather this is because of John. We would like to stimulate local courage in transmitting your creative discoveries about the care and feeding of the ST to local users, and also, if you wish, to John per the address above. He whets our appetite with a number of "insights" on "how to," e.g. when you wish to read the directory of a disk you have just replaced in the drive, without "mousing it," just hit [Esc] and the new directory will flow in over the old. (If you have "desktopped" so that you have two windows with both drives on the screen sized to your needs, click on the one you wish to refresh and then hit [Esc]. That from John Demar, now to encourage your local participation, these two "Tiny Thrillers" from CN correspondents.

Selection Windows: How often have you tried to switch directories in the Selection Window of a program, and after typing in on the Selection line, "B:*.*" or "A:," as the case may be, you click and watch the new directory flash on, and flash just as quickly off the screen? A "Tiny Thriller," instead of clicking on O.K. or pressing [Return], click on one of the programs in the old menu, and watch the new drive contents slip into place and stay there. [PAC Editor's Note: if you click on one of the programs in the old menu and there is a program in the new menu on the same line as the one you clicked on, the new program will be "selected." Try clicking at the top or bottom of the menu, above or below all programs, and you will not have that problem.]

Block File Copy: Power, at any price, (once you have your ST), is reaching up and pulling down a dotted line with the mouse to the left of a window of files, watching them black out, and then dragging them over to copy to another disk or drive or whatever you wish, such as a folder. To do it without having to later go back and "trash" those files which were in the block and which you didn't really want to copy but couldn't avoid, first, draw down your block of desired files to copy, but stop at the one you don't want. Then reposition the cursor at the next desired item and holding down the [Shift] and [Alternate] keys, simultaneously, press the [Insert] key, but deftly. Voila! The file blackens and you proceed to repeat the magic with any other files to be dragged smilingly to their new home. [PAC Editor's Note: I find it easier to press the left mouse button while holding the [Shift] key to select a file. And, by the way, when there are only a few files I don't want in a big block, I rubberband the whole block and then use the same process described to unselect the files I don't want.]

MaryLou J. White of Fremont, CA suggests:

Icon Names: To change the names of your disk icons (Drive A or Drive B or Trash), for the first two, click on the icon and then drag down the Install Drive from GEM, delete the current name and type in a new one. Once done, save the result to desktop on your boot-up disk. For the Trash Can, load the desktop file into a text editor (wordprocessor), change the name and save the file back to disk and then, after loading, save it to desktop again. MaryLou's icons read: Top Drive, Bottom Drive, and File 13.

From Kendall Whitesell, Linthicum, MD:

More on Copying: If you want to copy files from a window that is not active, most users will move the cursor to that window, click the left mouse button to activate the window, and then proceed with the copy (or delete) operation. However, there is an easier way. Assume both A and B drives are open and showing on the screen with drive A active. To copy a file from drive B to drive A, move the cursor to drive B. Then, HOLDING DOWN THE RIGHT MOUSE BUTTON, click on the file you want to move and drag it over to drive A. The copy will be accomplished without ever activating drive B.

PASCAL
Lesson Two: Identifiers
R. DeLoy Graham, PAC

Last month we examined the special symbols used in Pascal. Besides special symbols, Pascal tokens include several word symbols known as reserved words. BEGIN and END are examples. Reserved words may not be redefined by the programmer. A complete list of the word tokens reserved by **Personal Pascal** is printed on page 6-10 of the manual.

Identifiers are the names of various elements used in our programs. They allow us to add to Pascal's vocabulary. In **Personal Pascal**, an identifier must begin with a letter, but may contain letters, digits, or the underline character. These identifiers are valid:

```
TaxRate
Module256
Item_Count
```

These are invalid:

```
Tax Rate      (* no space allowed *)
Employee#     (* # not allowed *)
Module-2      (* hyphen not allowed *)
```

Personal Pascal makes no distinction between lower and upper case, so **INDEX**, **Index**, and **index** are all recognized as the same identifier. Furthermore, **Personal Pascal** puts no limit on the number of characters used to make up an identifier; however, the compiler looks at only the first ten characters, so it recognizes Twist_and_Shout and Twist_and_Turn as the same identifier.

There are several predefined identifiers in **Personal Pascal**. They fall into the following categories: Data Types, Constants, Procedures, and Functions. You will find them listed on page 6-11.

Data Types

In Pascal, each piece of data we work with must be of a specific type. The type determines how each piece of data is represented both in storage and on screen. Standard Pascal has four simple predefined data types:

INTEGER: a positive or negative whole number
(62 +62 0 -3000)
Personal Pascal also allows hexadecimal numbers
("4F $A0 $a33e)

REAL: a decimal number
(62.319 3.1415 -0.43)
CHAR: a single alphanumeric character
('A' 'a' '1' '+' '?')
BOOLEAN: has only two possible values,
TRUE and FALSE

Personal Pascal adds five other predefined data types. The first two, STRING and TEXT are quit common; somewhat unique are ALFA, LONG_INTEGER, and BYTE. A STRING is a group of one or more characters. As a constant, these characters must be enclosed in a pair of single quotes. TEXT is the data type associated with a variable name used to identify a file to which we will write or from which we will retrieve information.

Constants

TRUE and FALSE, INPUT and OUTPUT, and MAXINT are examples of predefined constants. The value of a constant cannot change during a program run; the value of a variable may or may not change. MAXINT is defined as the highest value that an INTEGER may assume on a particular computer. The lowest value can be referenced by using -MAXINT.

Procedures

Common predefined procedures include READ and WRITE, which function much the same as INPUT and PRINT in BASIC.

Functions

String functions such as CHR, CONCAT, and LENGTH are examples of predefined functions in Pascal. Math functions include ODD, ABS, COS, SQR, SQRT, and ROUND.

We have examined predefined data types in Pascal. One of the features that makes Pascal so powerful is the ability to create user-defined data types, thus extending the language to solve more complex problems in a simple and staight-forward manner.

Next time we will begin looking at program construction. You might want to examine George Hudetz' Day of the Week Program on pages 20-21 to get an idea of how a program is constructed. The final BEGIN-END block, known as the main procedure, is were execution starts. From there the program makes calls to other blocks. Each procedure or function has a unique identifier associated with it so that it can be referenced without ambiguity.

A COMPUTER PRIMER - LESSON #1: YOUR FIRST COMPUTER

Mark Cantrell

Reprinted from The Pokey Press, June 1986

So, you've finally taken the plunge and bought a new computer. Now for a little...What? You didn't buy an Atari!? Okay, I'll wait while you take it back and get a **REAL** computer. Dum-de-da-dum...

Ah, that's better. Now for a little background on computing. Ahem. The word "computer" is from the Greek "computos", which means, literally, "To tear out one's hair in great clumps." The first computer was called an "abacus", although nobody ever used them because the cords were too short to reach the outlet. The first electronic computer was invented by Herman Farks of Great Buns, Virginia, but since it was still the middle-to-late Nineteenth Century, Herman was forced to compute by candlelight. Things didn't improve much after that until about a hundred years later, when Atari loosed its model 800 upon an unsuspecting populace. Consumers everywhere responded by letting out a little involuntary gas. I mean, gasp. Sorry. Anyway, this is where you and your new computer come in. (We won't even discuss the ST here, since I can't afford one.)

When you and your computer first meet, it is best to extend your hand, palm down, in a nonthreatening gesture of friendship. The computer will tentatively sniff your hand and then either remove it at the wrist or wag its power cable as if to say, "I'm going to make your life a living Hell."

As the proud owner of a new computer, the question you must now ask yourself, aside from, "Where is my bank balance?", is the obvious, "What is my computer good for?" Your computer is good for the sixty-day warranty period, plus the age of your two youngest offspring, divided by your shoe size. (No kids? Big Feet? Boy, are you in for it.) Nevertheless, you have made a very wise purchase indeed, for a computer only needs about as much care and maintenance as your average three-day-old child, and without major expenditures for software and peripherals, is just about as useful.

Let's take a look inside your computer to see what makes it tick. Let's see - the screws are probably under this little sticker that says, "Opening case will void warranty." Here we go - Now, see all those little things that look like a bunch of worms? Those are called "wires" and they carry "electricity", which is what the computer needs in order to give you messages like "ERROR 162", the actual meaning of which is too horrible to even go into here. Anyway, if all those little "wires" were laid end-to-end, your computer would probably not work at all and you would have to go to the store and get another one. It would go something like this:

You: I'd like to return this computer, please. It's defective.

Salesclerk (munching caramel corn): Ho ongg a minugg, I'll hafg to page someonegg.

Intercom: (ptui!) Customer needs assistance in Electronics/Lingerie/Sporting Goods.

(A disgruntled but abrasive store matron appears, brandishing a large price-sticker gun.)

You: I'd like to return this computer, please. It's defective.

Clerk, in a mocking tone: "Well, if it isn't Mr. "Commodore-isn't-good-enough." NOW what's the problem?

You: Well, I laid all the wires end-to-end, and uh...

Clerk: Oh, well in THAT case...go suck Cheez Doodles.

(You leave the store in a blue funk, made worse by the fact that you have been marked down to $3.95.)

So you can see why you shouldn't touch those wires, although if the computer has been giving you a hard time, it's perfectly acceptable to pour a little liquid drain cleaner inside just to show it who wears the pants in the family.

There will come a time when you will decide that you want to do something useful with your computer. When this happens, take two Seconal and lie down in a dark room, cover yourself with hot water bottles, and listen to "Chances Are" as sung by Johnny Mathes. The urge should pass.

I hope this short lesson has afforded you some help. Now, if you'll excuse me, the Seconal is about to kick in.

SUBSCRIBE NOW!

THE NEW ALADDIN

A DISK PUBLICATION FOR ATARI 8-BIT COMPUTERS

SAVE $69.00

OFF THE SINGLE ISSUE PRICE
1 YEAR (SIX ISSUES) OF **MAGICAL ENTERTAINMENT**
FOR ONLY $79.95!
(SINGLE ISSUE PRICE $24.95)

RUSH YOUR ORDER – CALL US COLLECT

(214) 788-4441

USE YOUR VISA/MASTERCARD

PORTLAND ATARI CLUB
P.O. BOX 1692
BEAVERTON, OR 97005

BULK RATE
U.S. POSTAGE PAID
BEAVERTON, OREGON
PERMIT NO. 242