$1.50

PORTLAND ATARI CLUB

OCTOBER 1986

NEXT GENERAL MEETING
Monday, October 6, 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

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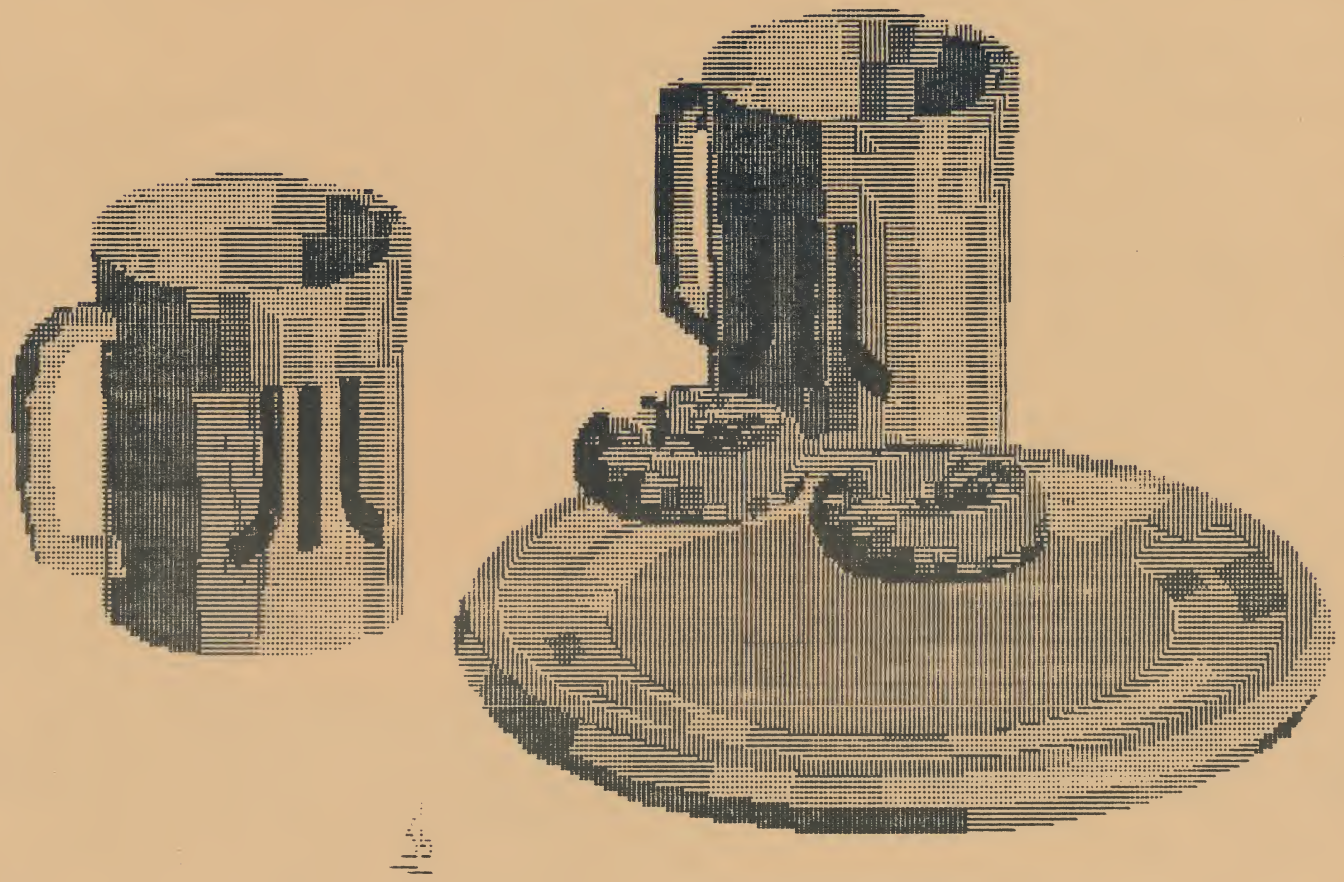

P O R T L A N D A T A R I C L U B

(Not affiliated with ATARI, Inc.)

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This newsletter is written and published by members of the Portland Atari Club (PAC), a group of people with a common interest: the Atari Computer. All articles are written and donated by members or are reprints of public domain material from other groups. Opinions expressed are those of the authors and do not necessarily represent the opinions of PAC or those of any other organization. Material appearing in this newsletter may be reproduced for non-commercial use, providing credit is given to the author and PAC or other originating group. Commercial use must be coordinated through the editor. 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

Are you ready for this? It's a new game for just Atari computers. Yep, you read it right--a game for just the Atari. What's more it was written by Mr. "T". This is a game the whole family can play; in fact, the bigger the family the better.

Now that I have you thinking that I'm one log short of a full load or one bit short of a full byte, let me explain the game. Mr. "T" wants to become the largest computer manufacturer in the world. Got it so far? Well, there are only so many initials in the "T" family, so this is where you come in. In the eight-bit line we have the 65XE and the 130XE. Now coming are the 260__, the 520__, the 1040__, and the 2080__. Next we have the sixteen-bit line: the 520ST, the 1040ST, the 1040EST, the 2080___, and the 4160___. Soon we will have the 1040TT and the 2080__. Perhaps you get the picture. Mr. "T" needs lots of initials so we just fill in the blanks.

Okay, okay. So this game isn't very exciting. But I for one am excited about Atari and where Mr. "T" and all the little "T's" are taking Atari.

When you read this, I will have already been to Sunnyvale and the Northern California Atari EXPO held at the San Jose Convention Center on September 20-21. I will report back to you at our next general meeting what I saw, heard, smelled and felt. One thing I want to do is invite Mr. "T" and company to the Silicon Forest. It seems they want to bring manufacturing back to the USA, and what better place than to Oregon!

We have a big show to put on in October. I have been calling the presidents of all Atari computer clubs in Oregon, Idaho, Washington, and British Columbia. The response has been great. Even before my call most had already organized car pools to come to Portland for our show. When offered a booth, most were anxious to have one and plan to bring their club disk libraries to sell and trade. We can still use volunteers for the show, so come to the meeting and help us out.

For those of you who missed our last general meeting, we gave away ten eight-bit programs, eight ST titles, and several gift certificates from Computer Mart in Vancouver. Most of the software was donated except for two newly released titles.

The sales room also has been very active with some real good buys on new and used software and hardware. We've missed many of you during the summer months. Consider this a personal invitation to come to our next meeting both to enjoy and to participate.

Just one more reminder: the EXPO is the weekend after our next general meeting. Tell all of your friends; better yet, bring them as guests to our next meeting to show them the support they will have when they buy an Atari. Dollar-off coupons are available from most dealers, so pick them up and give them to your friends and neighbors. Let's make this show a big success. It is up to us to get the word out.

BOARD MEETING NOTES
Dan Gibson

The August Board Meeting was held at 7 p.m. on September 2nd at IB Computers. Attending were the following: Dan Gibson, Steve Billings, Jim Berry, Jim Miller, Russel Schwartz, Jerry Andersen, Elanna Schlichting, Vern Vertrees, and Dean Wagner.

SEPTEMBER MEETING

The September 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 Group leaders will tell us what each of their groups is doing and when they are meeting. There will be a question and answer period. The giveaway part of the September meeting will feature a free drawing for donated Atari software, both 8-bit and 16-bit.

Next, Vern Vertrees will give us an update on the Children's Fair and the Northwest Atari Expo. 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 $552. At the meeting software and T-shirt sales totaled We received $780 for memberships.

EDITOR'S COLUMN
R. DeLoy Graham

With so much time being put into the Atari Expo and into getting back into the swing of a new school year, this issue of the newsletter has been a real challenge! Hopefully, you will be reading this before the October general meeting, but if not please be understanding. The newsletter staff puts a lot of time into preparing the newsletter for you, most of which goes unrecognized and unappreciated. It's not as if we were making big money or anything! Our time is donated, and all of us on the staff are very busy people with very little free time to give. We do hope that our efforts are appreciated.

This month, I submitted an article on **Softworks BASIC** in place of the Pascal column I started a couple of months ago. IB Computers has provided me with a copy of **Kyan Pascal** to review for the eight-bit Atari line, and I will be including references to it in future Pascal columns, but I want to spend more time with it first. My initial impression is that the eight-bit Atari line now has a legitimate Pascal which rivals any of the implementations found on other eight-bit computers. It will be especially powerful on the 130XE with its extended memory and ramdisk capability. The documentation is some of the best I have seen for any eight-bit software. It was prepared with the assistance of Technical Writers Inc. of New York. The three-ring bound, looseleaf manual contains fifteen lessons to introduce beginners to Pascal. Everything looks very standard. I had no problem editing, compiling and linking my first program. This language is suitable for any programming class that allows Pascal to be used, including those classes which study more advanced data structures. Kyan has a winner! More on this next month.

I had promised a review of **TextPro** from ABACUS, but quite frankly I am not very pleased with it. Some features I like very much; others have baffled me. I cannot figure out how to indent a paragraph five spaces. I am sure I am overlooking something, but how hard should it be to indent a paragraph? I also know of no way to change page layout from one page to another. **TextPro** does print in multiple columns, so I have used it to print two of the articles in this issue. But for everything else I am still using **Regent Word**, which I feel is the most versatile, efficient, and reliable word processor for the ST to date. If it only printed in double columns!

EIGHT-BIT EXPLORERS SIG
Questing after RAMbrandts and Rubber Stamps
Lee Bole, PAC

The 8-Bit Explorers were meeting during the summer months, in case you all didn't know it. Randall Leong is an explorer who pursues a program he likes until he has a facility in using it. He explores every possibility of that program, and I'll bet he even invents some. Then he shares what he knows and has done with that program with the other Explorers.

Such was the occasion at the September 9 meeting. Randall has worked extensively with **Rubber Stamp** (XLENT) and with **RAMbrandt** (Antic). He has made some very fine new fonts using the 16 x 16 editor. Randall's family is involved in the graphic arts field, so he has some experience in type styles and design. Creating a font file takes hours at the computer, and Randall used a typeface specimen book to create his fonts. He has created about ten new fonts for use with **Rubber Stamp**. "BROADWAY" is an art-deco type; "MAHARAJA" has an Indian flavor; "EXPORT" looks like the stencils painted on crates at the docks. There are others, all painstakingly fashioned by Randall and, fortunately for us, saved to disk as 16 x 16 fonts.

Rubber Stamp is a very useful program when explored in depth. Labels can include icons which can be taken from **Print Shop**, **Koala Pad**, **Touch Tablet**, **RAMbrandt**, or other drawing programs. These labels can also include various type styles (fonts), various sizes, "sliced" letters, italicized versions, and even rotated letters, so you can print text sideways or even upside down!

Whether you prefer the **Koala Pad**, the **Touch Tablet**, or the keyboard, all are usable in the Graphics Editor mode. And you can easily move your drawing over by scrolling, if you wish.

Of course, Randall is quite adept at using **Rubber Stamp** (he's quite adept at a good number of other programs, too), but with some practice a person can soon make good application of this program. Wayne Winterbottem also has used this wonderful utility to create appealing flyers and disk labels.

RAMbrandt is a powerful drawing program. Randall demonstrated how one can create a drawing, or redesign an existing one, and save it to disk as a **MicroIllustrator** (**Koala Pad** and **Touch Tablet**), **MicroPainter**, or a **RAMbrandt** file. These can all be used with **Rubber Stamp**.

FREE DISK CLINIC
October 1Ø

BEST Electronics will be in Portland on Friday, October 10, to hold another disk clinic. This is the day before the Northwest Atari Expo. BEST will also have a booth at the Expo and will be selling only at the show.

The disk clinic will be held at the Northwest Service Center (where we have our monthly general meeting) at 1819 N.W. Everett Street. The clinic will begin at 2:00 p.m. and conclude about 10:00 p.m.

Here is your chance to have your disk drives "tuned" and cleaned. The only charge is for parts, if needed.

If you are interested in having a memory upgrade performed on your XL, a gentleman from Seattle will be at the clinic to do them. He charges about $12 for labor. Call Chuck Hall for more information.

****

NOTICE TO PURCHASERS OF HIPPO C
Respond by October 15, 1986

Jim Berry of IB Computers announces that the deadline for returning **Hippo C** Compilers in exchange for Haba software is October 15. This is a one-time exchange graciously offered by Haba Systems to make up for the problems many of us have had with **Hippo C.**

As reported in the August PAC Newsletter, Haba Systems offers **Hippo C** owners any current Haba Software title for only $10 with the return of **Hippo C.** But you must hurry! The deadline is October 15th. If you want to make an exchange, act quickly. The rest of us are anxiously awaiting our new software. Please note that you may trade in your Hippo C Compiler at IB Computers whether or not you purchased it there. They are simply collecting the software for shipment.

****

IMPORTANT DATES	
Board Meeting	September 29
Northwest Atari Expo	October 11-12
Newsletter Deadline	October 17

****

THE FIRST NORTHWEST ATARI EXPO
Bill Chan, PAC

Over 10,000 people are expected to attend the largest computer enthusiasts show in the Pacific Northwest to be held at Memorial Coliseum October 11 and 12, 1986.

This is the first computer show staged in Portland to be organized and financed by a group of computer enthusiasts.

The First Northwest Atari Expo is being organized by the Portland Atari Club, a local not-for-profit computer user-group of 600 family members.

Many of the Atari computer user-groups from the Northwest will be participating in the show, along with over 50 computer software developers, hardware designers and computer dealers.

Featured in the show will be the full line of Atari computers, the latest technology in computer generated music and graphics, as well as business, education and entertainment software demonstrations and seminars. Furthermore, computer enthusiasts will have an opportunity to compare notes, swap public domain software with friends, and hunt for a bargain or two from the many computer and software vendors at the show.

It will be a show not only for those already deep into computers, but also for those who want to get to know the square box called a computer but do not even know how to start asking the right questions.

"It will be a show for the family," says Chuck Hall of the Portland Atari Club. "Other than the many computer wizards around in the show, there will be many of the club members who are just amateurs like us to answer questions and share their personal experiences."

Of special interest will be live demonstrations of computer generated music. Participants will see and hear how the latest software can bring the art of music composition to the electronic age.

Visitors will have ample opportunity for hands-on experience with the latest business, education and entertainment software for Atari computers.

Admission to the show is $3. One-dollar discount coupons are available at all the Atari computer outlets. The show hours are 10 a.m. to 9 p.m. on Saturday, October 11, and 10 a.m. to 6 p.m. on Sunday, October 12, 1986.

NORTHWEST ATARI EXPO

Saturday, OCTOBER 11, 10 AM - 9 PM
Sunday, OCTOBER 12, 10 AM - 6 PM
Memorial Coliseum

$1.00 off admission

Limit one coupon per person

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Sunday, OCTOBER 12, 10 AM - 6 PM
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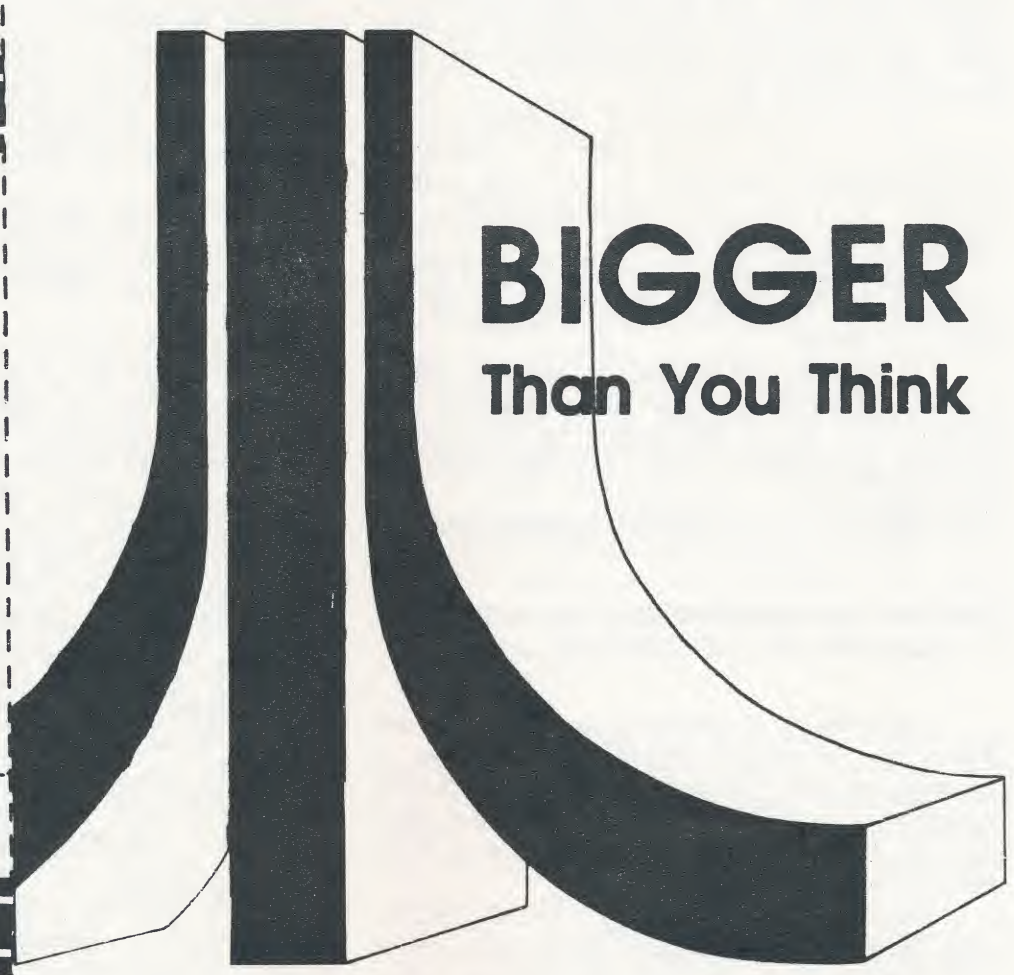

BIGGER
Than You Think

Bigger in BUSINESS • Bigger in EDUCATION • Bigger in ENTERTAINMENT

NORTHWEST ATARI EXPO

Saturday, **OCTOBER** 11, 10 AM - 9 PM
Sunday, **OCTOBER** 12, 10 AM - 6 PM
Memorial Coliseum

- Seminar
- Demonstrations
- Latest Software & Hardware
- Digital Music
- User Groups
- Dealers

Tickets $3.00 at the door*
Children under 8 FREE

Sponsored by PORTLAND ATARI CLUB

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.

MEMBERSHIP NOTES
Jim Miller

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

Eric Geislinger	Tim Brown
Henry Raetz	DMT Electronics
Randolph King	IB Computers
J.R. Holland	Stan Straus
Jack Grigorieff	Robert Feldham
Lurene John	Paul Gilleland
David Blakeslee	Robert Turner
Stephanie Lynn	Perry Smith
Lynn Weeks	Ralph Doran
Charles Levell	Duane Graven
Chris Eisenhart	Charles Gadd
Luong Tran	Duncan Neilson
Rollin Ratchen	Allen Cavallo
John Cantilon	

I am still working on command files for **dBMAN.** Trying to get **dBMAN** working properly has been a lot of work. In the middle of all this, I decided to try **H&D Base** the same way. In all cases **H&D Base** wiped **dBMAN** off the map when it came to a time trial with **dBMAN.** **dBMAN** is very slow compared to **H&D Base.** But, **H&D Base** still has a bug that I do not like. I keep getting the error message, "File out of range". The program still does something to the index files. **dBMAN** is almost as slow as **Synfile** when it come to a sort, an index or a pack. It will not work in ramdisk, which would speed things up. **H&D Base** does! I hear that the author of **H&D Base** has the rights to the program back, so it is no longer orphaned. If the bugs are removed, I feel **H&D Base** would be a better program. There are several command files on CompuServe that have been written for **H&D Base.** Some of them use windows and Gem.

****

AUTHORIZED SERVICE CENTERS

Micro Care
2203 NE Oregon St
Portland, OR 97232
230-0770

NW Computer Support
10200 SW Nimbus, G1
Tigard, OR 97223
684-3280

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

PORTLAND ATARI CLUB 8-BIT DISK LIBRARY

Jerry Andersen, PAC

DOS 2.5
AMIS BBS WITH ALL FILES

TRANSLATOR 1
TRANSLATOR 2
TRANSLATOR A & B

HOME AND BUSINESS I
1.checkbook balancer 2.loanplus
HOME AND BUSINESS II
1.calendar 2.address 3.tinyedit
4.tinyplan 5.property 6.loan
7.stock
HOME AND BUSINESS III
1.pvperiod 2.iraprnt 3.sinkfund
4.homefin 5.phondex 6.business
7.balancer
EXTENDED BASIC
(WORKS WITH 400 800 ONLY
HOMEPAC KIT
(WORKS WITH HOME PAC)
PRINTSHOP GRAPHICS DISK 1
works with print shop
UTILITY I
1.timeclok 2.disam 3.erortrap
4.supercom 5.peeker 6.disktape
7.rpm 8.autorun 9.fileindex
10.variable 11.renum 12.transl
13.examine 14.string 15.autorun
16.transl 17.datastmt 18.bootcopy
19.backup1
UTILITY II
1.charalt 2.casdump 3.memtest
4.sticktest 5.scrndump 6.systat
7.blink 8.doswiz 9.doc.bas
10.delete 11.gemprint 12.dsklabel
13.ljkdir 14.rpm.new 15.datagen
UTILITY III
1.soundit 2.mattedit 3.painter
4.createfont 5.textdump 6.menumake
7.protect 8.superdir
9.and 16 different fonts
S-COPY 810
UTILITYS 4
a collection of menu programs
UTILITY 5
14 different disk and mailing label programs
GAMES 1
1.smash 2.tictactoe 3.bombers
4.towers 5.gallery 6.robotwar
7.rocket 8.price 9.concen
10.horserace 11.alien
GAMES 2
1.clewso 2.starwarp 3.electric
4.maxit 5.gunner
GAMES 3
1.froggie 2.myriaped 3.sherlock
4.gobbler 5.grubbs 6.bats
GAMES 4
1.manic 2.fillerup 3.harvy
4.defend 5.livewire 6.vultures
7.chicken 8.maze 9.uxb
GAMES 5
1.spaceatk 2.frog 3.spaceres
4.doggies 5.carrace 6.slot2
7.crypto 8.blockade
GAMES 6
1.trivia 2.football 3.creepycave
4.monopoly 5.crypto
GAMES 7
1.clue 2.kbert 3.risky
4.wormbeme 5.clubdemo 6.bowler
FRIDAY FUN
(FROM ENGLAND)
1.brains 2.othello 3.patience
4.artistpad 5.calendar 6.bribery
7.ayo
GAMES 8
1.thunder 2.airattack 3.nerm
4.roto 5.maze war 6.railking
GAMES 9
1.rockslide 2.lander 3.pinball
4.elevator 5.speed ski 6.clashofkings
GAMES 10
1.wumpus 2.gold 3.killzone
4.sneakattak 5.empire
SKI CONSTRUCTION SET
build your own down hill race course
ADVENTURE 1
1.blackhole 2.klondike 3.windsloe
ADVENTURE 2
1.volcisle 2.aboutime
ADVENTURE 3
1.barboz 2.kidnap 3.road
4.operation sabotage
ADVENTURE 4
1.arabian 2.treasure 3.alien
CARD GAMES
1.cribbage 2.stud poker 3.bingo
4.yahtzee 5.bridge 6.blackjack
EDUCATION 1
1.biorithm 2.hamgman 3.light
4.math2 5.mathdrill 6.calendar
7.simon 8.begintype 9.mathpkg
10.states 11.americas 12.metrics

```
EDUCATION 2
     1.volcano     2.oregon       3.square
     4.make change
EDUCATION 3
     1.pakjana     2.aboxes       3.fraction
     4.lemonade
EDUCATION 4
     1.spellbee    2.jane         3.function
     4.noteprat    5.numberline   6.slide
     7.multiply    8.magicblacb   9.morse code
    10.metrics    11.typing
EDUCATION 5
     1.moneyhunt   2.mathatk      3.wordscramble
     4.reading
     5.moleatatype
EDUCATION 6
     WORLD GEOGRAPHY QUIZ
DEMO 1
     1.boxdemo     2.chopstix     3.ellipse
     4.etchskch    5.giggle       6.jazz
     7.logo        8.magic        9.puff
    10.dialogue   11.nitemare    12.vegas
    13.scroll     14.fugue2      15.message
    16.starship   17.soundstk    18.stringar
    19.clock      20.starwars mus
    21.xmastree   22.bargraph demo
DEMO 2
     1.sselect     2.magic        3.sunset demo
     4.hymn.mus    5.nutdance     6.messiah
     7.supergr     8.sgdemo       9.graphic gtia
    10.titlegen   11.shuttlepic
DEMO 3
     1.atarilogo1  2.atarilogo2   3.faucet
     4.waterfall   5.hiway        6.kscopes
     7.horse1      8.horse2       9.horse3
    10.snowflake  11.octadraw    12.cubedraw
    13.etchasketch               14.pencils
    15.boxdemo1   16.boxdemo2    17.boxdemo3
    18.micropic   19.voyager.pic
ENTERTAINMENT 1
     1.earth       2.100mdash     3.popcorn
     4.ballsong    5.invaders     6.firebug
     7.rats
ENTERTAINMENT 2
     1.atari3d     2.kinks        3.blackcat
     4.chompers    5.chopriod
AMODEM71
     works with MPP, 1030, MX301, AND 850
     interface
AMODEM 66
     works with MPP 1000, 1000C, AND 1000E
     only
PRO TERM 1030
     works with 1030 AND 835 only
COPY 130
     by ERNIE NEGUS more options than
     the one that appered in Antic Magazine.
PLUS COPYMATE 130, AND COPY130XE
HARDWARE 1
     build A 256K 800XL OR 320K to 1meg 130XE
EXPRESS 850
     works with any modem using
     the 850 interface
STORY 1
     CHILDREN'S STORY GRAPHICS
     "THE NOSIY GIANT"
STORY 2
     CHILDREN'S STORY GRAPHICS
     "CAVEMAN JOE"
************************************************
```

DEALERS CORNER

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

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

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

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

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

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

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

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

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

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.

USING FACTOR TREES TO WRITE INTERACTIVE STORIES

Clyde List, PAC

Editor's Note: Clyde List, our resident cartoonist, has developed a new form of story writing which he describes in this article. He has submitted a Computer Story Package to Antic for possible inclusion in their catalogue. Charles Cherry, Product Development Supervisor for Antic, called his first sampler "an amusing piece of programming," and said it "fits well into our 1986 product line. [The product] is exciting and may lead to a continuing genre of computer software."

I can remember the first time I saw a row of characters march across an Atari screen display. It reminded me of a row of geese flying through the air. In those days there wasn't much else to do, because Atari software was hard to find. And so I spent a lot of time playing with words and seeing what Atari BASIC could do with them.

After a while BASIC became a real struggle. The more complicated my interative stories became, the more jumbled my computer programs became. One solution was to write flowcharts on pieces of notebook paper. But this, too, turned to spahetti, and it wasn't very much fun. "Now wait a minute!" I said finally, "This is the computer age. The computer is supposed to do the work, not me."

And so I began to experiment with numbers to see if I could find a system that would organize the pages for me as I wrote them. After about four years of trial and error, I "discovered" the factor tree. I didn't know it was called that until one of my Sunday School kids told me what it was.

The factor (or binary) tree is an ingenius device. The computer understands them very well, although humans are frequently baffled by them. Anyone who has been involved in a chain letter knows how beguiling the factor tree can be. Each limb in the tree branches into two more limbs. With each tier of branches the total number of branches doubles. 1*2=2, 2*2=4, 2*4=8, 2*8=16, and so forth into infinity. If you have ever listened to someone trying to sell you an Amway dealership, you know all about factor trees. With each tier of sales your wealth doubles, right? The computer understands binary trees because the computer itself is nothing more (or less) than a binary logic tool. In 6502 machine language only one instruction is needed to multiply a number times two (ASL [number]).

In order to create a factor tree, you must "ASL" the root number, as well as "ASL" and "INC" the root number. This way 1 branches to 2 and 3. 2 branches to 4 and 5. 325 branches to 650 and 651. Etc., etc. etc. If these numbers happen to be the identification numbers for files in a computer story, then you and your computer can generate files for as long as your imagination and your RAM hold out. You will always have two avenues of escape from any one file, and there will never be an overlapping of files.

The factor tree is certainly not as complicated as the algorithms that must go into an Infocom story. However, if telling a good story is what we are after, the factor tree ought to provide more than enough ground for the writer to expand on his topic.

At least in theory. . . .

There is one problem that must be overcome before you can start writing really good stories on the factor tree model. But it is a problem faced by all computer software to some degree.

And that is the problem of repetition. Since the computer operates on a closed circuit, all its applications are cyclical. Office secretaries complain about this. With the typewriter they could sit back and relax after a long writing project and have that extra cup of coffee. But with a computer, no matter how long or how hard the secretary has laboared, the blinking cursor is still there waiting for more.

The writer of interactive stories must solve this problem of cycling anyway he can. One solution is to just let the reader fall into one trap door (or cliff or dragon's mouth) after another until he finally remembers which way not to turn. But slamming doors in the reader's face goes against everything I ever believed about computers. Computers were supposed to open doors, not close them!

The factor tree system can overcome repetition somewhat by giving the reader hundreds of routes to follow. But even this is not enough. Although a word size index can keep track of more than 65K files, the reader still takes no more than eight steps in any direction before he crosses all the tiers and drops back to page one again. There seems to be no solution to the problem of repetition, no matter what algorithm you use.

Unless repetition itself becomes the subject of the story! What would you write about if you wanted to write a story about repetition?

After a great deal of experimenting over the last six years, I have come to the conclusion that repetition is an important part of our lives. Anyone who has ever played an old argument over and over in his mind knows how important repetition is. Who has not replayed scenes from the future and the past? A phone call to the girl down the street, a job interview, a visit to the Atari Club. This continual recycling of information that we do is the stuff from which soap operas are made! And it is a process that only the computer--with its ability to mimic the mind--can adequately express.

Another interesting discover I made about factor tree stories is that you don't even need an Atari to write them. When I am away from my 130XE I spend a lot of spare time scribbling in these folded pieces of typing paper. An ordinary sheet of unlined paper, if folded on itself three or four times, makes an excellent factor tree. My desk is covered with these little chunks of paper. . . .

DESCRIPTION OF INTERACTIVE STORY PACKAGE

FOCUS OF EVIL was begun in 1984. It is a science fiction story about conflicts between a planet and her space colonies. Two visitors from Colony Ebir are swept up in Elendram's primitive "War Ritual." Language: Atari BASIC. Interaction: five players. Size: two SD DS diskettes.

CLYDEBURGER was begun in 1985. It is a comedy adventure about a fellow who keeps turning the wrong corners in his home town of Clydeburg. Language: Atari BASIC. Interaction: five players. Size: one SD DS diskette.

CLYDE LIST SAMPLERS I & II demonstrate the advantages of computerized fiction over traditional fiction writing. SAMPLER I contains three short stories in the mystery, sci-fi, and "Twilight Zone" genres. SAMPLER II contains three more stories: a western, a strange tale, and sci-fi story. Language: machine language. Interaction: four players. Size: one SD SS diskette.

THE DOUBLE is a strange tale about a robot that forgets it's a robot. Language: machine language. Interaction: 4 players. Size: 1 SD SS diskette.

NEWS FROM AROUND THE WORLD

News from AACE, August 1986:

Tiny C is now available for the ST. It is an interactive C just like BASIC. It is said that the easiest way to learn C is to learn Tiny C and then switch to real C. Tiny C is available only through AACE. Send $14.50 (includes shipping) to Austin Atari Computer Enthusiasts, 8207 Briarwood Lane, Austin, TX 78758. The disk includes all the sources for the program. You still need the Tiny C book.

Compute! magazine may shortly be entering ST programs in BAR CODE so that they can be entered automatically into the ST if you have a bar code reader. They will also be selling one cheaply.

News from NACEC, Jan-Mar 1986 (by way of AAAUA, September 1986):

Atari has achieved a dramatic breakthrough in Europe with the news that the Dutch government has selected the 800XL as its recommended micro for the country's schools.

The company now predicts that this will result in sales of 100,000 machines to educational outlets in Holland over the next two to three years.

Atari was given the blessing of the Dutch after months of negotiations and in the face of intense competition from major rivals.

This is now being seen as the key to unlock the door to similar deals all over Europe. However, France remains the one country were Atari is unlikely to make much headway, thanks to the chauvinistic attitude of the French themselves.

As part of the Dutch deal, the 800XL--named as Home Computer of the Year in the British Micro Computing Awards 1985--is now being featured in a television series there.

THE GLASS

An Interactive Story

(c)1986 Clyde List

Goto Page 1

1

Oscar saw his own face on the other side of a glass.

Goto 2 or 3

2

He climbed off the bus and ran across the street. But there was no one there.

Goto 4 or 5

3

Oscar stood on the street corner and watched the bus disappear around the corner. 'This can't be!' he thought.

Goto 6 or 7

4

Oscar called the Police.

'What!?' the voice replied, 'We've got you on ice down at the morgue!'

Goto 8 or 9

5

He stepped into an alley and waited for the face to come back. But then it started to rain.

Goto 10 or 11

6

Oscar called his girl. "I never want to see you again after what you said to me last night!" she screamed.

Goto 12 or 13

7

He went into a theater to see a movie.

When the curtain went up Oscar saw his own name in the list of credits.

Goto 14 or 15

8

Oscar ran to the morgue. When he saw the body he disappeared.

'Hoo boy.', the coroner said, 'I need a vacation.'

END

9

Oscar took his suitcase out of the closet and ran to the bus depot. He arrived just as the bus was leaving.

Goto 1

10

Oscar dusted himself off. He found an uptown bus and went over to look into the windows.

Goto 1

11

Oscar jumped out of bed. 'JEEZ!' he cried, 'What a crazy dream!'

He got dressed and ran to the bus stop.

Goto 3

12

Oscar ran over to see her. But he saw her walking away with the Face. 'But that's not me!' Oscar cried.

the END

13

Oscar drank a six pack of beer to forget his troubles. He fell sound asleep and dreamed that he was on a bus.

Goto 2

14

'SHHH!' a woman whispered.

'But don't you see?' Oscar laughed, 'I'm the guy reading this story!'

The END

15

'Shaddup!' a man yelled.

But Oscar couldn't stop crying. 'Every-thing I ever do is wrong!' he moaned.

The END

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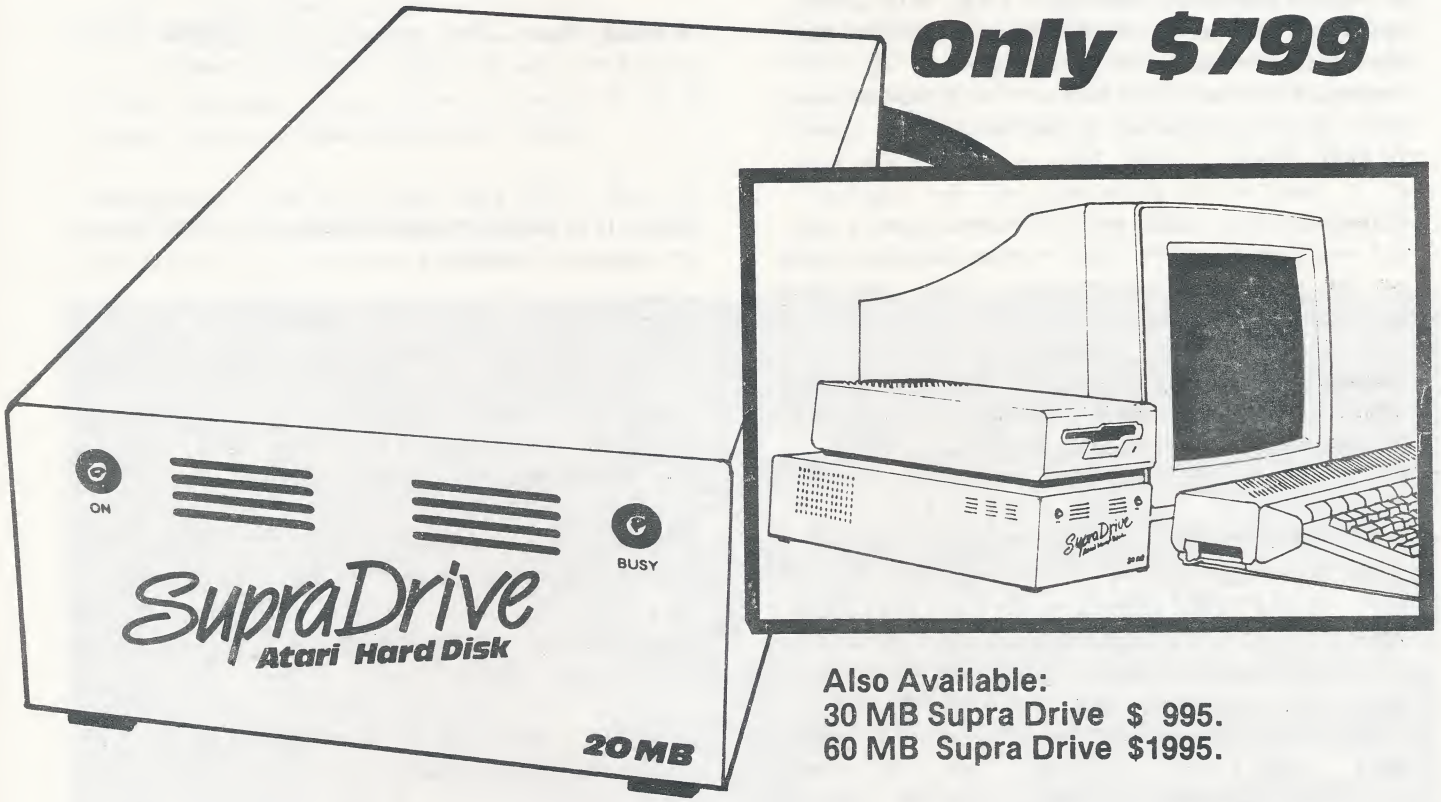

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GAME SECRETS

Helps from Preston ACE (by way of JACG, July 1986):

Castle Wolfenstein: You can shoot through the sides of the screen and kill everyone that is in the aim of your gun.

Ultima II: I have noticed that sector #16 holds all a character's quality, like his gold, agility, strength, hitpoints, etc. You can edit the sector and just put in your own. I would recommend Diskey, Diskfixer, or Disk Wizard to do this. The data shows up in decimal, so it is easy to spot it.

Telengard: To raise your hit points, gold, etc. all you have to do is load in your character with any DOS compatible wordprocessor. Then, just type over the old numbers!

Jumpman: On the first board, go to the extreme right, type 54354. Then you can push the number of the board you would like to go to.

Tips from S*P*A*C*E, June 1986 (by way of JACG, LAACE and ACUSOFT):

Mask of the Sun: To get you going, try this. Get Map. Look Map. Get Jeep. You will be traveling north automatically. Continue West. Get All. Go out Jeep. Go hut and give food. The old woman will give you a flute and tell you something...remember it. Then go out and get in jeep. Go west, the northwest. You will be at the statue of a cat whose head has been removed. Drop all but pills. get out of jeep and look statue. You will see secret record XOTZIL. Remember it. Get head. Drop head on statue. The statue turns into a jaguar and departs.

F15 Strike Eagle: Always running out of gas on those long missions? Try using the 'A' afterburners for energy.

Koronis Rift: There are 20 levels of play. Get the guardian base and the planet is yours. Patience is the answer for this one.

Pitfall: Start the game by pressing OPTION and you will have unlimited lives.

Pharoah's Pyramid: The code word is 'THRONE.'

Pharoah's Curse: The password is 'SYNISTOPS.'

Canyon Climber: If you complete the first screen and have lost any men, hold the joystick button as the bridges blow up and you will have three men but no score.

Diamond Mine: The password is 'DIAMOND.' This will bring you to levels sixteen to twenty.

Hints from Milatari Newsletter, July 1986 (by way of Computer Squad):

Zork I: In the loud (echo) room, type the word 'ECHO' and all is fixed. You can get the bar by typing 'GET BAR.'

Ultima III: To get into the Exodus Castle, type the word 'EVOCARE.'

All On-Line Adventures: When you die, press RESET and you can continue without graphics forever.

Spare Change: Pressing CONTROL-Z will bring you to the zerk control panel.

Track Attack: On the box car screen, listen for a click from the keyboard, then one second later jump.

Lode Runner: Press CONTROL-E while loading from editor command menu. Now you can type on character commands.

Spelunder: In sector 28, look for this string: A6 CB 30 2D. Change it to this: A2 07 86 CB. This will give you unlimited lives.

Threshold: Remove threshold disk from drive after loading. Every time the drive restarts, you will be up one level. Insert disk when drive is off to start at that level.

Preppie: Pause the game while in play. Press RESET and re-start it. All objects except your man and frog will remain.

Donkey Kong Jr.: Pause the game, hold down the SHIFT key and type 'BOOGA.' Un-pause the game and press 'S' to change screens, 'K' to make yourself immune to snappers, birds, and sparks.

Scrolls of Abadon: The following is a list of commands to type while playing:

WALL - allows movement against arros.
ICE - suppresses monsters temporarily.
RES - type when game is over and you will get one free man.
SPA - this creates a shield which will kill all monsters.
FLI - warps you to next level.
VIS - makes disks visible without gems.
MAP - makes all parts of the map visible.

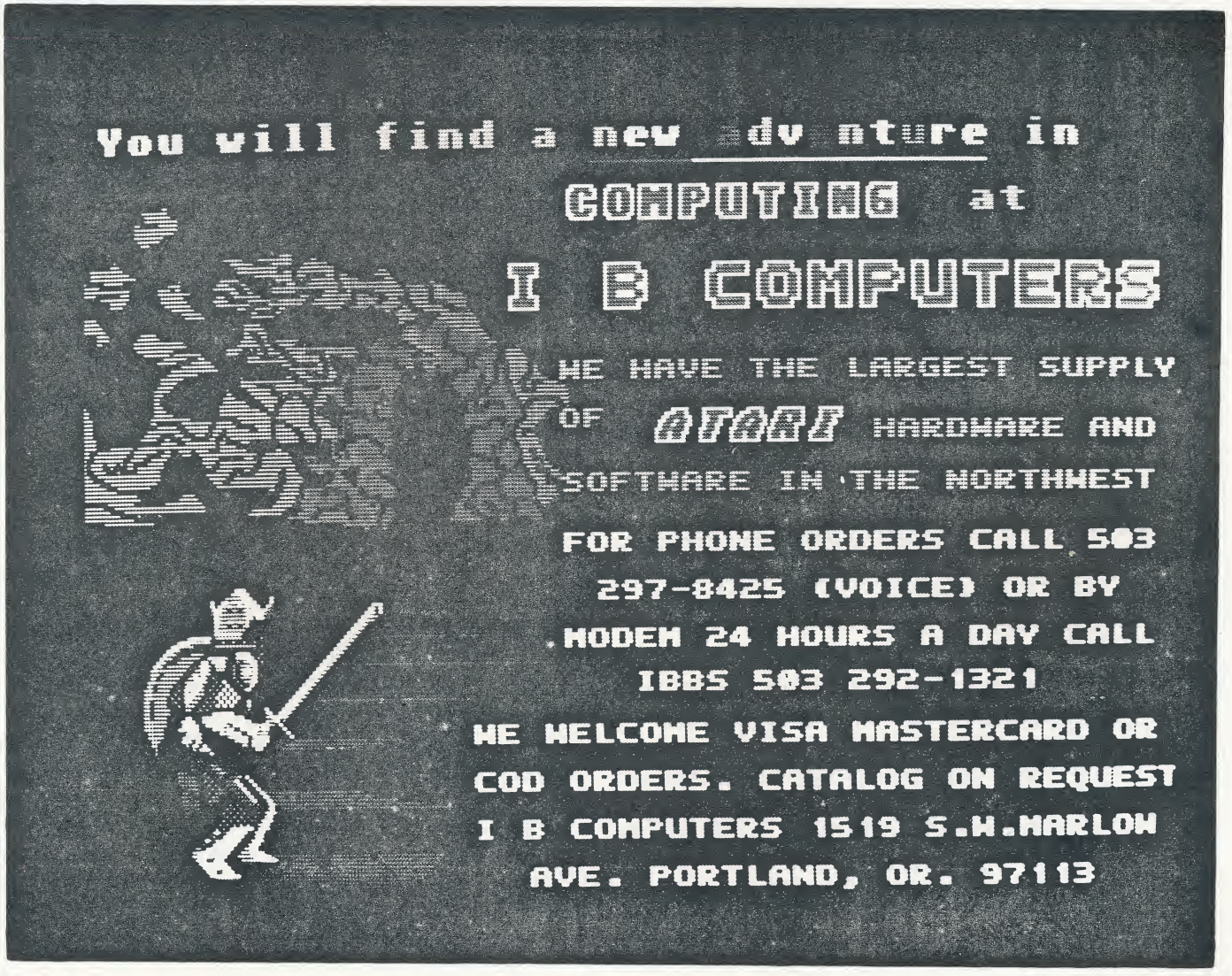
Ollies Follies: Type these passwords to go to higher screens. FRANK FANDA NORBI ZOOOM.

Ghostbusters: For your name, type 'GOO.' When it asks if you have an account, type 'Y' ACCOUNT #:11111111. You will have $246,000.

Ghost Chasers: Hit the START button. Then type 'FANDA.' You will start at a higher level.

TIDBITS by Mike Aldrick of CompUtah (by way of September 1986 FACCS Newsletter):

MINER 49ER: Start the game (starts at Station 1 Zone 1), jump up on the first platform and walk him all the way over to the far right (as far as he will go) and then press the following keys: 2137826861. Now press <SHIFT> and the number of the station you want to go to. From now on all you have to do is press shift and the number of the station you want to go to. No one told me the Zone would change, too, so you have to be careful because there are 10 Stations and 10 Zones, for a total of 100 different levels. By the way, that 10 digit number is the phone number that is displayed at the beginning of the game, so you don't have to look at this article every time you boot up the game.



IF YOU'VE GOT THE TIME

Steve Golden
Reprinted from July/August ACE Newsletter

One excellent feature of modern computers is an internal clock. The internal clock allows automatic coding of data files and programs with the current time and date when they are saved. This means you can just look at the time stamp to find out which is the latest version of a file. It also allows you to utilize internal date functions in certain programs like VIP's @TODAY function. Some word processing programs allow pulling the internal date and time and placing them into your document. There are also many new "calendar", or reminder-type programs showing appointments when you reach the specified dates. Some even interrupt your current task to act as an alarm clock.

When I got my 520ST, one of the first things I did was set the time and date in the control panel. No more guessing which of the 33 versions of "LIFESAVE.C" is the most recent. To my surprise the date reverted to 05/29/85 every time I turned on the ST. This means I have to remember to reset the control panel every time the ST was turned on if I want to utilize the system time/date. Since remembering things like that are not my strong point, I spent a lot of time ending programs, correcting the time and date and re-entering the program. I also have quite a few files dated May of '85!

Mind Mine to the rescue! Mind Mine Computer Center (13256 N.E. 20th St., Suite #4, Northrup Bldg., Bellevue, WA 98005, (206)641-6138) has developed a battery powered internal clock to keep track of the time and date even if your ST is turned off. It's called the TIME-SAVER and comes with complete installation instructions. To install the TIME-SAVER, you open the case, unplug the keyboard, unplug an IC, plug in the TIME-SAVER, plug in the IC, plug in the keyboard and close up the case.

There! All done! What! You don't believe it's that simple? Well, OK! You're right! Those are the steps but there are a few "sticky" points you may run into. The instructions are broken down into twenty-two steps and include seven or eight warnings. It took me forty minutes to install the TIME-SAVER. I went extra-slow because I get very nervous pulling ICS and worrying about static discharges.

There are a few things I did differently than instructed. When pulling the keyboard plug, instead of pulling the wires, I used a long nosed pliers and levered up each end a bit, alternating until the plug came loose. If you try this, be very careful to not crush the plastic wire holder! Placing the IC into the TIME-SAVER board is the most difficult step. It is possible to bend the IC pins if the pressure isn't applied evenly, and it does take quite a bit of pressure to seat the IC. I place the IC feet-up on the table and pressed the board onto it, but pushing the IC into the board may be just as easy. Either way, be careful. In two places, the components on the TIME-SAVER come very close to the shield or components on the computer. The instructions say if they come too close, stick some insulated tape between them. Since the tape is included, I feel it should be used as insurance even if the parts don't touch.

Lee Rahfeldt of MIND MINE told me some of the older STs have a capacitor which may be in the way of the TIME-SAVER board. If you have one of these, you will have to clip the lead to the capacitor, bend the capacitor out of the way and solder on a longer lead. My ST didn't have this problem so I don't know how much trouble it might be, but it doesn't sound too bad. Also, be warned: The screws from the back of the ST case may be slightly longer than the ones from the front. If you get them mixed up, you may end up redesigning your case! If you are careful and follow instructions, you shouldn't have any trouble installing the TIME-SAVER but, if you have any doubts, have your dealer or a knowledgeable friend install it for a "nominal" price.

So! Does it work? Yep! Sure does! The instructions I have say to leave the computer on for 10-15 minutes to charge the battery. Lee told me to leave it on for eight hours the first time. After two hours, I turned the ST off for one minute and the time and date were still correct when I turned it on again. The battery is supposed to hold its charge for 15-20 days before needing recharging but I refuse to leave my ST off long enough to test that. If I go on a long vacation, (and don't bring my ST), I'll find out if it lasts that long. I have had the ST off for twelve to fifteen hours and the time/date was still correct.

Also included with the TIME-SAVER is a program to display the time and date when you turn the computer on. This program, "Timesave", should reside in an "AUTO" folder on each disk you boot from. When the system is turned on or reset, the control panel resets the displayed time/date to the one originally set in ROM. "Timesave" resets it to the current time/date. If "Timesave" isn't run, the time/date displayed in the control panel will be incorrect but the correct time/date is still stored in the TIME-SAVER so the next time "Timesave" is run, the panel will be updated correctly. There are later versions of the control panel that don't update the time/date when the system is reset, so, if you use one of these, it isn't necessary to run "Timesave" for the time/date to be displayed correctly.

There is another benefit to TIME-SAVER. If you use the @TODAY function in VIP, the control panel must be loaded as a desk accessory and takes up memory which should be available to your spreadsheet. Instead, delete the control panel accessory from your disk and run or auto-run "TIME-SAVER" before loading VIP. I did this and had the correct date plus an additional 17616 bytes available. Wow! A free 17K upgrade included with every TIME-SAVER!

The TIME-SAVER is a fine product and I think it's more than worth the $49.95 retail price. MIND MINE also markets their 1 MEG 520ST upgrade, (reviewed in April 1986 ACE), MT-Forth-83, talking personalized puppets (I've got to see these), educational VHS tapes and many other products. They seem always willing and eager to answer questions and to help in case of any problems. It's good to know that they support the products they sell.

****

PAC Help Hotlines

Adventure Games	Russell Schwartz	646-6418
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ST General	Chuck Hall	626-3717
ST Fundamentals	Richard Barhitte	206-573-0292

REVIEW OF LEADER BOARD GOLF

(from ACCESS Software)

Jack Van Nostrand, PAC

This golf simulator is an excellent game with good graphics. It can handle from 1-4 players with three difficulty levels.

The novice level is the easiest to play, because you have no hook or slice to contend with and the wind does not affect the shot. The amateur level is a little harder in that if you are not careful you will slice clear off the screen. More about this later. The professional level is the same as the amateur with the exception of the wind as a factor in the shot.

You can select the number of holes you wish to play:

SHIFT-1 for 1-18 holes
SHIFT-2 for 2-36 holes
SHIFT-3 for 3-54 holes
SHIFT-4 for 4-72 holes

You can select four different courses to play. Each varies in difficulty. If more than 18 holes are selected, you can play the courses in any order. For example, if you have selected 72 holes and wish to play all courses, enter 1 2 3 4 or 2 3 4 1, etc.

You choose your club by moving the mouse up or down and pressing the left button for your selection. A 1 wood is used for the longest distance and a Pitching Wedge (PW) for up to 83 feet. The putter is automatically selected once you are on the green.

You are presented with a cursor located several yards in front of the golfer. This is used to aim your shot.

The swing is as important in this game as it is in the real game. In the novice level it is not important to pay attention to the snap part of the swing. You just aim the cursor, press the joystick button until it hits the top of the gauge, and release the button. In the amateur and professional games, there is a section on the gauge called snap. This controls the hook and slice. The sequence is as follows: START - POWER (RELEASE AT TOP) - SNAP or BUTTON - RELEASE - BUTTON. The best way to learn to hit the ball straight consistently is to practice on the driving range.

This program uses the same set-up as Paperclip in that to play the game a security key is provided and must be in joystick port #2. This is a nice feature as backups are permissible.

Leader Board Golf is also available for the ST, Amiga and C-64. Additional 18-hole course layouts for use with **Leader Board** are also available. Tournament Disk #1 is available now.

BASIC COLUMN
DAY OF THE WEEK: Softworks BASIC Version

R. DeLoy Graham, PAC

Chuck Hall is on vacation this month, so I am going to take over his BASIC column and write a little more about **Softworks BASIC.** I will share with you some routines that you may find helpful if you are using this version of BASIC on the ST.

I became interested in **Softworks BASIC** when I heard that Softworks Limited is the same company that wrote AlphaBASIC for the Alpha Micro, which is the system we have for programming at Beaverton High School. In the two years I have been at BHS, I have written several programs using AlphaBASIC. A significant one is a grading program that is between 40 and 50 pages long, includes several files, and makes use of most of the features of the language, including random access files, record structures, and machine language calls. As soon as I purchased **Softworks BASIC**, I immediately downloaded my grading program from school and tried to compile it on the ST. I had to make some minor changes with PRINT TAB(-1,) statements, which are used to access screen-specific commands, because the ST doesn't support all of the options available on our terminals at school. However, after a few changes, the program ran. At last I have seen the day when I could run the same program on two different computers! To make matters even more promising, Softworks also has versions for the Macintosh and the Amiga.

This month's ANTIC includes a review of **Softworks BASIC** written by David Plotkin. I refer you to his article on pages 72 and 73 for more information. I would like to mention a solution to the problem he noted of error messages that appear only momentarily on the screen. Early releases of **Softworks BASIC** are really not designed for running from GEM. If you run them from any of several available command line programs, the messages will remain on the screen. I load the compiler, the runtime program, a public domain command program (COMMAND.TOS v0.35 LTG), Jerry Cole's excellent text editor, and my source code into a ramdisk, and then I run the command program, from which I execute the editor, the compiler, and the runtime program. I find this a very efficient environment in which to work.

Stephen Eitelman, who reviewed **Softworks BASIC** in the September issue of Current Notes, reports that this BASIC is slow for math applications when compared to Philon or ST BASIC; however, it "handles string manipulations very efficiently--between three and four times faster than ST BASIC, and two to five times faster than the Philon Fast/BASIC-M compiler." Because most of my programs are not very math intensive, I have been very pleased with the speed of **Softworks BASIC.**

I appreciate Chuck's efforts to have the same program written in several different languages. It is helpful to me to see the code for a program in a "foreign" language that I understand thoroughly in my "own" language. Therefore, I will introduce some of Softworks' uniqueness by rewriting Chuck's "Day of the Week" program.

[We are also printing a Forth version by George Howard. Eight-bitters: I see no reason why you can't get in on this. How about a version in ACTION!?]

This month, let's look at the MAP and INCLUDE statements, and examine how SB accesses the system time and date. The following declarations (**LISTING 1**) I have saved in a separate file to demonstrate the INCLUDE statement. This file is called DATEMAPS.BSI. (BSI is the extension for BASIC INCLUDE files.) An INCLUDE file is a text file that will be read into memory before any compilation takes place; it is compiled along with the program that includes it.

SYSDATE is declared to be a four-byte binary number. The next MAP statement maps a four-byte variable called PROGDATE over the top of SYSDATE by the use of the @ symbol in front of the variable name. PROGDATE has four fields (it is a record structure). Our reason for doing that is to be able to access each of the four bytes separately. We will first read SYSDATE by using the statement "LET SYSDATE = DATE". According to page 33 in the manual, DATE returns a 4-byte binary number for the system date. The highest byte is reserved for the day of the week; however, since the ST does not store the day of the week, this byte always contains a value of 0. The next byte contains the last two digits of the year (we must add 1900). The next-to-the-lowest byte contains the day of the month (1-31), and the lowest byte contains the month (1-12). [Please note that the manual makes an error here. It says that the lowest byte is "the day of the month (1-31)" and that the next-to-the-lowest byte "contains the day of the month (1-12)."]

The next four variables are for string representations of the date. We will use them to hold the conversions that the program will make. Today'sDate is a 30-byte string variable that will hold the entire date, which will be created by concatenating the string variables holding the individual parts.

The last six variables are for finding the system time. Except for the last one, these are all floating point numbers. A floating point variable is made up of six bytes, so "mapl T,f" creates the same variable as "mapl T,f,6" would create. "mapl Clock,f,6,60" creates a floating point variable called Clock and assigns it the value of 60. If you assign a value to a floating point variable, it must be the fourth item in the map statement. It could be written "mapl Clock,f,,60" since the default size for floating point variables is 6.

File number 2 (**LISTING 2**), which I have called SYSDATE.BSI, contains the routine necessary to display the system time and date on the screen as part of the initialization phase. I have used nested IF-THEN-ELSE statements rather than the ON-GOTO that Chuck used, just to show another way of branching to one of several choices. George Hudetz accomplished the same thing with a CASE statement in his Pascal version (printed last month). I have also used a PRINT USING statement to print the time. The "#Z" indicates that the number should be printed with any leading zeros. The PRINT TAB(ROW,COLUMN) statement allows you to print at any location on the screen.

LISTING 3 is the main body of the program. Except for the map statements and organization into subroutines, the program is the same as Chuck's. The "&" symbol has been used several times to extend a logical line over two or more physical lines. I have used labels in place of line numbers. One thing to note about using GOTO or GOSUB to a label is that the command word must be in the instruction; for example, "IF BADFLAG THEN ERR'MESSAGE" is incomplete. The statement should be written, "IF BADFLAG THEN GOSUB ERR'MESSAGE." Another item to note is that **Softworks BASIC** is case sensitive; "Num" and "num" are different variables. However, command words may be written in lowercase, uppercase, or mixed case.

! **********

LISTING 1 -- DATEMAPS.BSI

```
mapl SYSDATE,b,4
mapl PROGDATE,@SYSDATE              ! PROGDATE is mapped over SYSDATE
     map2 S'WeekDay,b,1             ! so that we can access each byte
     map2 S'Year,b,1
     map2 S'Day,b,1
     map2 S'Month,b,1
mapl Month,s,10                     ! to hold string representation of date
mapl Day,s,2
mapl Year,s,2
mapl Today'sDate,s,30               ! the whole date as a single string

mapl T,f                            ! variables to hold system time
mapl Clock,f,6,60
mapl Hours,f
mapl Minutes,f
mapl Seconds,f
mapl Appendage,s,5                  ! a.m.  or p.m.
```

! ********** END OF LISTING 1 **********

LISTING 2 -- SYSDATE.BSI

```
ShowToday'sDate:
     SYSDATE = DATE
     IF S'Month=1 THEN Month="January " &
                  ELSE IF S'Month=2 THEN Month="February " &
                  ELSE IF S'Month=3 THEN Month="March " &
                  ELSE IF S'Month=4 THEN Month="April " &
                  ELSE IF S'Month=5 THEN Month="May " &
                  ELSE IF S'Month=6 THEN Month="June " &
                  ELSE IF S'Month=7 THEN Month="July " &
                  ELSE IF S'Month=8 THEN Month="August " &
                  ELSE IF S'Month=9 THEN Month="September " &
                  ELSE IF S'Month=10 THEN Month="October " &
                  ELSE IF S'Month=11 THEN Month="November " &
                  ELSE Month="December "

     Day=val(S'Day)
     Year=val(S'Year)

     S'Year = S'Year + 1900
     If S'Month < 3 then S'Month = S'Month + 12 : S'Year = S'Year - 1
     N = S'Day + 2 * S'Month + int(0.6 * (S'Month + 1)) + &
     S'Year + int(S'Year/4) - int(S'Year/100) + int(S'Year/400) + 2

     Call CalcWeekDay    ! *** this routine is part of the main program

     Today'sDate=WeekDay+", "+Month+Day+", 19"+Year
     print tab(1,49); Today'sDate    ! *** display date on row 1, column 49

     T = TIME                                    ! Get the system time
                ! Time returns the number of seconds elapsed since midnight
     Hours = int(T/(Clock ^ 2))                  ! Compute hours
     Minutes = int(T/Clock) - (Hours * Clock)    ! Compute minutes
     Seconds = int(T) - ((Hours * (Clock ^ 2)) + (Minutes * Clock))
H'Mod:
   ! Adjust to 24 hours
     if Hours > 23 &
        then Hours = Hours - 24 : goto H'Mod
     if Hours > 11 &
        then Hours = Hours - 12 : Appendage = " p.m." &
        else Appendage = " a.m."
     if Hours = 0 &
        then Hours = 12

     print tab(2,49);
     print (Hours using "#Z");":";
     print (Minutes using "#Z");":";(Seconds using "#Z")+Appendage

     return

! ********* END OF LISTING 2 ***********************************************
```

LISTING 3 -- WEEKDAY.BAS

```
!                          DAY OF THE WEEK
!                            by Chuck Hall
!                      modified by R.  DeLoy Graham
!                         using Softworks BASIC
!                          Portland Atari Club
!                               08/26/86

! ************************************************************************

mapl User'sDate,s,10                    ! date entered by user
mapl DAY,s,2                            ! variable to hold pieces of user's entry
mapl MONTH,s,2                          !    "
mapl YEAR,s,4                           !    "
mapl D,f                                ! numeric conversion of string entries
mapl M,f                                !    "
mapl Y,f                                !    "
mapl N,f                                ! holds numeric value of day of week
mapl WeekDay,s,9                        ! string representation of day of week
mapl Answer,s,1                         ! variable to hold user's responses
mapl badflag,f                          ! flag to skip calculation and display
mapl true,f,6,-1
mapl false,f,6,0

! ************************************************************************

++include DATEMAPS.BSI                  ! maps used to get system date

! ************************************************************************

InitScreen:
      print tab(-1,0)                           ! clear screen
      print tab(1,5) "DAY OF THE WEEK"
      gosub ShowToday'sDate                     ! put system date on screen
      return

! ************************************************************************

Begin:
      call InitScreen           ! clear screen and show today's date & time
      call GetUser'sDate

      if not badflag &
         then call DisplayDate

      TryAgain:
         print tab(15,5) "Do you wish to try another? (Y/N): ";
         toolbox Cconin, Answer          ! GEMDOS call; reads character
         if ucs(Answer) <> "Y" then goto Exit     ! ucs converts string
   Goto Begin                                     ! to uppercase

Exit:
   End
```

```
! ************************************************************************
!                              SUBROUTINES
! ************************************************************************

GetUser'sDate:
      badflag = false
      print tab(3,5);
      input line "Enter date (MM/DD/YYYY): "; User'sDate

      YEAR = right(User'sDate,4)              ! pull year out of User'sDate
      MONTH = left(User'sDate,2)              ! pull month
      DAY = mid(User'sDate,4,2)               ! pull day

      D = val(DAY)                            ! now convert each to number
      M = val(MONTH)
      Y = val(YEAR)

      if (M<1 or M>12) or (D<1 or D>31) or (M=2 and D>29) or Y<1 &
         then gosub BadDate &
         else if M < 3 &
                 then M = M + 12 : Y = Y - 1

      if not badflag &
         then N=D+2*M+int(Ø.6*(M+1))+Y+int(Y/4)-int(Y/1ØØ)+int(Y/4ØØ)+2
      return

! ************************************************************************

BadDate:
      print tab(-1,Ø)
      print tab(2,5) User'sDate
      print tab(4,5) "Invalid date was input."
      badflag = true
      return

! ************************************************************************

DisplayDate:
      call CalcWeekDay
      print tab(5,5) WeekDay
      return

! ************************************************************************
++include SYSDATE.BSI
! ************************************************************************

CalcWeekDay:
      N = N mod 7          ! N is the numeric representation of the week day
      if N = Ø then WeekDay = "Saturday" &
         else if N = 1 then WeekDay = "Sunday" &
         else if N = 2 then WeekDay = "Monday" &
         else if N = 3 then WeekDay = "Tuesday" &
         else if N = 4 then WeekDay = "Wednesday" &
         else if N = 5 then WeekDay = "Thursday" &
         else WeekDay = "Friday"
      return

! ********** END OF LISTING 3 ******************************************
```

DAY OF THE WEEK: Forth Version

George Howard, PAC

```
\ .day by George Howard - Written in Forthmacs V1.1
\ Useage:  9 29 1986 .day <return>  --  the output is "Monday"

decimal

variable day
variable month
variable year

: figure-weekday (  -- n )      \ calculate weekday number 0 - 6
        month @ 3 <
        if      12 month +! -1 year +!
        then
        day @ month @ 2 * +
        month @ 1+ 6 * 10 / +
        year @ + year @ 4 / +
        year @ 100 / -
        year @ 400 / +
        7 mod
;

create days     31 c, 28 c, 31 c, 30 c, 31 c, 30 c,     \ #days for each
                31 c, 31 c, 30 c, 31 c, 30 c, 31 c,     \ month

: leap-year? ( n -- n )         \ n = n+1 if leap year
        year @ 4 mod 0= year @ 400 mod 0= or
        if      1+
        then
;

: outside ( n min max -- f )    \ true if n < min or n > max
        >r over > swap r> > or
;

: check-input (  --  )          \ stop processing on bad input
        month @ 1 12 outside abort" Bad month."
        day @ 1 month @ 1- days + c@ month @ 2 =
        if      leap-year?
        then outside abort" Bad day."
;

: .day-of-week ( n --  )        \ prints day of week
        case
                0 of ." Monday" endof
                1 of ." Tuesday" endof
                2 of ." Wednesday" endof
                3 of ." Thursday" endof
                4 of ." Friday" endof
                5 of ." Saturday" endof
                6 of ." Sunday" endof
        endcase
;

: .day  ( month day year --  )  \ prints day of week
        year ! day ! month !
        check-input figure-weekday .day-of-week
;
```

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