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ATARI®

Your Monitor on the World of Atari

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FEATURES

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MANAGING EDITOR: Joe Waters (703) 450-4761
ST EDITOR: Frank Sommers (301) 656-0719
XE EDITOR: Jack Holtzhauer (703) 670-6475
WAACE MEMBERSHIP LIST: Earl Lilley (703) 281-9017
CONTRIBUTORS: Gregg Anderson, John Barnes, M. Evan Brooks, Mark Brown, Milt Creighton, John Crowll, Stephen Eitelman, Pamela Rice Frank, Dan Greenblatt, Jeff Greenblatt, Bob Kelly, Joe Kuffner, Bill Moes, H.B.Monroe, David Mumper, Andy Nicola, Bruce Noonan, Ron Peters, Ed Seward, Dave Small, Frank Sommers, Joe Waters, Terry White

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The ST EDITOR is Frank Sommers, 4624 Langdrum Lane, Chevy Case, MD 20815. The XE/XL EDITOR is Jack Holtzhauer, 15817 Vista Drive, Dumfries, VA 22026. Submissions of articles or review copies of products should be sent directly to the appropriate editor. Deadline date for articles is the 10th of the month. Advertising copy, subscription requests or back-issue orders should be sent to the MANAGING EDITOR, Joe Waters, 122 N. Johnson Rd., Sterling, VA 22170. Deadline date for advertisements is the 14th day of the month.

EDITORIAL

In February I said we would see a lot of new and exciting products emerge this year. At this writing, it's only March and some real blockbusters have already been announced. Bob Kelly tells you a little about the Apple announcements. Let me tell you just some of what happened at MicroSoft.

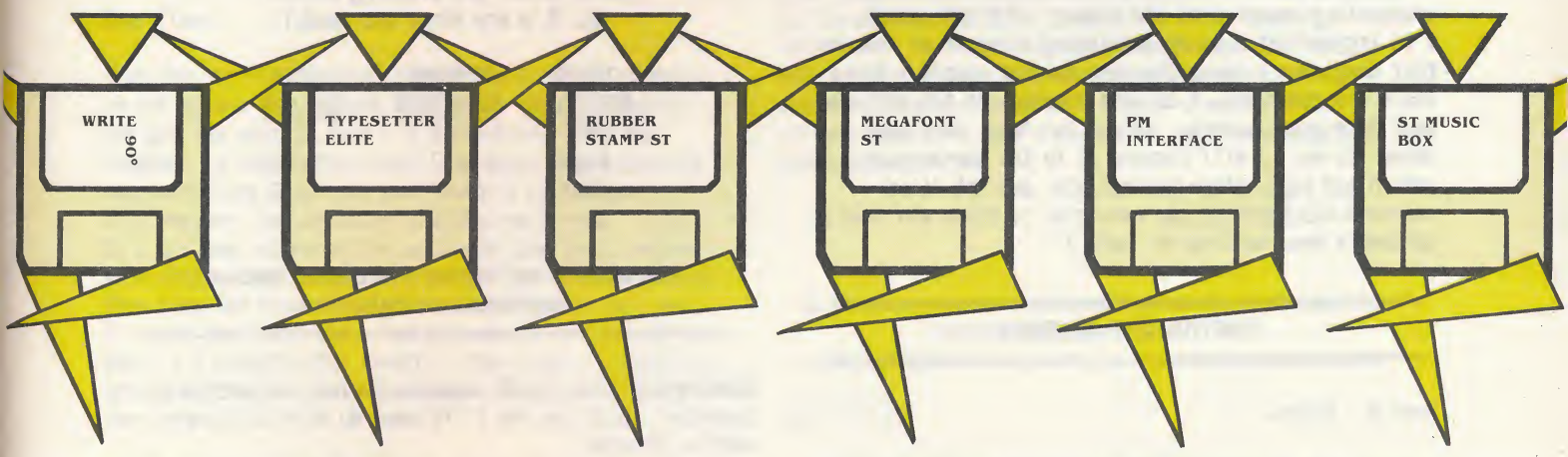
During the first week in March, Microsoft hosted its Second International Conference on CDROM. There were quite a few veritical market products announced (for auto parts dealers, hospital emergency rooms, military logistics officers, etc) and one very important horizontal market product. MicroSoft announced their first CDROM product: *Microsoft Bookshelf*. This is a complete reference library that any editor would drool over, available at the stroke of a key and compatible with all the major word processing packages (running under MSDOS).

Of course, it has a spelling checker, one that catches typographical errors - *nad* instead of *and*. as well as phonetic errors - *newmonya* instead of *pneumonia*. But it has much more. How about the complete American Heritage Dictionary with 200,000 definitions, Roget's II: Electronic Thesaurus with 500,000 synonyms, The 1987 World Almanac and Book of Facts, The Chicago Manual of Style, and Bartlett's Familiar Quotations with more than 22,500 historical and contemporary quotations. We're not done yet. A complete book of Forms and Letters has every conceivable letter you may want to write. Just put in an address, any address in the country, and let the U.S. ZIP Code Directory put in the zip code for you. Need to know where to get information? The *Bookshelf* includes Business Information Sources, a comprehensive guide to the best sources of business information. And, FINALLY, the Houghton Mifflin Usage Alert warns you about common errors in word usage (*affect* or *effect*, *farther* or *further*).

Retail price? $300, ready this June. Bundled with a CDROM player (with audio) from Amdek, retail price for package of player and *Bookshelf* is $1,100. The drive works on IBMs or IBM compatibles. You can't get this for the ST. Jack's still waiting for CDROM prices to drop. The rest of the world is busy producing databases and, very often, bundling the data with an IBM clone and a player thrown in (IBM clones have gotten as cheap as ATARI). Atari has an IBM clone, but you can't use the Atari PC -- not only is it not here yet, but it doesn't have room for any standard IBM cards.

Prices will drop. Jack may come out with a CDROM drive. However, with all the development now going on for the IBM market place, what makes him think any producer is going to port his software over to the ST just because it can now handle a CDROM drive? Early on, Atari was the only company showing a CDROM product. Bundling an Atari with a drive and a CDROM database might have been an attractive system for a lot of these data pioneers. But the drive is not there (Jack's still waiting), so the IBM clones are getting the nod. What a pity.

The Atari ST Software Line Up



WRITE 90°
$29.95 This package turns spreadsheets, text and screen output on their ear by allowing vertical formatted files to be printed sideways using continuous or single sheet paper. Incredibly useful for those over sized spreadsheets or flow chart style programs. Five character sizes are available. WRITE 90° is GEM based and supports Epson FX, SMM804, NEC, PROWRITER and compatible printers.

TYPESETTER ELITE
$49.95 Is a GEM based desk top publishing package that integrates text, graphics and DEGAS like drawing tools and allows for a full lay-out page preview and a what-you-see-is-what-you-get print out. TYPESETTER ELITE can handle custom fonts and icons; and ASCII files can be loaded into TYPESETTER ELITE pages. You'll be impressed with the high resolution and clarity of your printer output when it is driven by TYPESETTER ELITE.

RUBBER STAMP ST
$39.95 A utility that lets a user manipulate pictures from DEGAS and other popular graphics programs. RUBBER STAMP ST is useful for creating icons and printing out repititious full screen pictures, graphic address labels, index, Rolodex or other card sized output. RUBBER STAMP ST can add text to pictures in multiple sizes and styles and can load in fonts from DEGAS and MEGAFONT ST.

MEGAFONT ST
$39.95 Soup-up your printer output by designing your own fonts with GEM based MEGAFONT ST. Mix font styles to indicate italics or to provide emphasis. Arrange, space, position and size text and graphics in a document with MEGAFONT ST's click through "GEM" menus. MEGAFONT ST embeds graphics, text and fonts in the same file. Compatible with DEGAS, NeoChrome and the XLEnt Line Up of ST software, MEGAFONT ST also has a built in font editor. MEGAFONT supports SMM804, NEC, PROWRITER and EPSON compatible printers.

PM INTERFACE
$29.95 Is a GEM based driver that will enhance the utility of Print Master. PM INTERFACE allows Print Master to be integrated with DEGAS and the XLEnt Line Up of ST Software. You can use PM INTERFACE to create new Print Master graphics and borders using stored portions of DEGAS and other picture files. PM INTERFACE converts Print Master graphics into icons that can be manipulated by the XLEnt ST software utility Line Up.

ST MUSIC BOX
$49.95 A MIDI utility that lends graphics support and other administrative tweaking support to your composing. Allows for changing key and time signatures, inserts, deletes and copies measures. Prints high quality sheet music with the option of lyric and graphic notation. Compatible with an ST console or a MIDI synthesizer. ST MUSIC BOX is another MIDI progression from the authors of the Abacus book, Introduction to MIDI Programing for the Atari ST.

P.O.Box 5228
Springfield, Virginia 22150
(703) 644-8881
Order Number
(703) 569-8881
Customer Service
TELEX 269728 XLENT UR

XLENT Software [U.K.]
516 Alum Rock Road
Alum Rock
Birmingham B8 3HX
United Kingdom
(021) 327-6110
TELEX 265871 (MON REF G)

LETTERS TO THE EDITOR

[As many of you know, holding a full-time job and producing Current Notes, I just don't have the time to do everything that I would like to. Invariably, things that are not of immediate pressing concern get put on a "to do" pile and sometimes stay there much too long. Letters to the Editor sometimes fall into that category, particularly those that ask questions. I often don't immediately have the answer, nor the time to find an appropriate expert with the answer. But this month, I'll try and catch up by publishing a number of letters that have come in over the past several months. Where there are questions, I am sure somebody in the audience must have some answers. If you can help, send your answer to me. I will forward it to the appropriate person and also, where appropriate, publish it so everyone can benefit. My apologies to those who have so patiently been waiting for help.]

FUNCTION KEYS ON YOUR XL

Dear Mr. Waters

I would like to thank Computer Service Land for sending me an issue of Current Notes. I ordered a ROM upgrade chip for my Percom drive and they included it in the package and it works great! ... I was delighted to find such a good Atari newsletter/magazine! The magazine has just the kind of articles and reviews that I am interested in reading. In Current Notes I have read more interesting information about what Atari is up to than I have in several of the other Atari magazines. I would have subscribed a long time ago, but I didn't know this newsletter existed (I think your newsletter has so much good stuff to read, I'll call it a Magazine).

Down here in Alabama there aren't many of us Atarians around. This is mainly a Uggh-Commodore, & TRS-80 (Trash-80) area. There is only a FEW of us Atari users around here. If it weren't for Analog and Antic, I wouldn't even know if Atari was still alive!! But now, thanks to your great magazine, I have a third source of great info on Atari happenings! (I didn't mention Compute, 'cause it is so heavily Commodore biased, and what little Atari info that is there can be read in the store in less than 30 seconds.)

I am using an 800XL I upgraded to 256K myself. All programs 'think' I have a 130XE. Also, I missed the old internal speaker my 800 had, so I followed the 800 schematics, and added a speaker and circuit to my 800XL. I also got a couple of 1200XL keyboards cheap, so I modified one and installed it in my 800XL. Something I discovered, was that all XL computers support the F1-F4 function keys! All you have to do is have the switches installed and wired in to the keyboard decoder chips! Cursor movement w/o pressing control, cursor home and keyboard on/off etc. Just like the 1200XL. Here is the wiring chard I wrote.

The two numbers separated by a comma are connected together when a key is pressed.

1200XL CURSOR CONTROL KEYS
(Move cursor w/o pressing control,
ALL XL's are wired and ready!)

CURSOR DIRECTION	KEYBOARD CONNECTOR	IC'S U24,U25
Left	14,2	5,1
Right	14,7	5,12
Down	13,7	4,12
Up	13,2	4,1

(IC numbers and keyboard connector numbers correspond to 800XL.)

Mapping the Atari,XL,XE Appendix Twelve, tells of the different functions the F1-F4 keys do with shift or control pressed.

Roger Tolbert
Ozark, Alabama

A FIX FOR ST PRINTERS

Dear Joe,

I noticed the article in the May and June issues of Current Notes about the ST not driving some printers. I do not yet own an ST and that problem sounds like one which must be solved before I buy one. (ATTENTION ATARI CORP.)

Since the articles mentioned above only suggested the possible cause of the problem, I would like to suggest a fix if in fact the NOT STROBE is the problem. Possibly this has already been tried by the hardware hackers, but if not ....

Throw a 74LS122 IC chip with a variable resistor on it onto the NOT STROBE line. The 74LS122 is a chip made specifically for this type of problem. It can give you any pulse length you want just by turning the variable resistor. Of course this is much easier said than done and a hardware type will have to figure the proper capasitor/resistor to get the proper range of pulse lengths for this application. I don't know if the printer port on the ST has a +5 line on it, but assuming it does, a splice can be made in the printer cable to connect the 74LS122 via a small box/circuit board like those available from Radio Shack. Radio Shack will not have the 74LS122, so an electronics supplier must be

located. If I were doing it, I would try to fit the chip into the ST but we know what that does to warrantees.

Mike Doleman
Richfield, MN

KUDOS TO L & Y

Dear Frank,

I am the guy from Georgia that got the advice of where to get my one meg upgrade when I was in DC in August. I did get the upgrade from L & Y Electronics and was pleased. A few months later, I ordered some expensive equipment from L & Y who sent it in a timely manner. I did, however, have trouble with the equipment. A call to L & Y and return of the equipment and they promptly sent another one. They were very cooperative that time. This time the second one gave up and another call and L & Y sent the third one. You guessed it, it gave up too, and L & Y accepted the return. This time, I'm getting credit and will order many smaller items over the next few months.

As you may guess, I am sending a kudo to L & Y Electronics for the professional manner that they handled the problem. I am receptive about you publishing this letter with my recommendation that one who deals with L & Y Electronics can feel confident that they will be treated properly.

Clayton E. Houston
Marietta, Georgia

SMITH CORONA DEVILLE & AD ASTRA RETURNS

Dear Joe:

My spouse talked me into buying her a new electronic typewriter. This is a Smith Corona DeVille 200 and seems to be a very nice daisy wheel type of machine. In looking it over, I note that it has a 9-pin socket in the rear and will operate with a computer but the SM people are very stingy on giving out any information. I wonder if any one of the group might be able to give me some idea how to cable this to my 850 interface.

To those people in the Current Notes family who are also amateur radio operators, I would like to call their attention to the fact that the old Atari Ad Astra has, like the Phoenix, rose from the ashes and is again viable. The net meets on Sunday at 1600 Zulu with Dave, KD7VA in Las Vegas as net control. Please check in if propagation allows.

Wm. R. Doctor
St. James City, FL

EDIT AND RUN ON THE ST

Dear Joe:

I'd like to share with you a bit of serendipity: on the 1040ST, when EDITing a program, and you want to RUN the program, to see how the edited portion performs, DO NOT EXIT EDIT! Just click on RUN, and run the program. When satisfied, click on BREAK, and you will be returned to the same EDIT window in which you were working. Very convenient! Also, the program runs faster in the EDIT mode, probably because the windows are not flopping around. This has saved me a lot of time. You may already know this, but I had never heard of it before stumbling on it.

T. B. Withers, Jr.
Dayton, Ohio

MUSIC PROGRAMS FOR THE XL/XE

Dear Editor,

...My particular interest is music composition of the contrapuntal sort. I am working within the limitations of the 8-bit Atari sound chip, hoping that AMY may yet appear as a peripheral. As a consequence of these limitations, I am concentrating on the architecture of the music -- the manipulation of thematic materials by transposition, inversion, variation, and so forth. I cannot find a commercial music program for the 8-bit Atari that allows me to do what I want to do and what I know is within the capability of the POKEY chip and the 6502 processor. I have a master's degree in music, but am self-taught as a programmer... Do you know of any music composition program for the 8-bit Atari that permits the building of complex musical structures from basic melodic and rhythmic materials, somewhat in the manner of a good word processor? I am hoping that some musician with more programming experience has written such a program and that you may know where I can find it.

In the event that the AMY chip never does appear in a peripheral for the 8-bit computers, I am interested in learning about the construction of a music-producing peripheral using an available sound chip. Radio Shack has recently come out with a three-voice programmable chip with envelope and dynamic control. Do you know if anyone has worked out the hardware and software to interface one or more of these ICs with an 1-bit Atari?....

Benjamin P. Clark
Spencer, West Virginia

TIP FOR MYDOS USERS

Dear Sir:

....Here's a tip for MYDOS users (v 4.1 to 4.2C) -- big upsurge in MYDOS users, as you know, what with it's being shipped with the excellent Newell 256K 800XL upgrade and its bullet-proof (uncrashable) ramdisk of 1,522 sectors (or 1,010 sectors, protected, with Basic XE! -- although I prefer Turbo Basic). Well, to the "Tip" ---> Read all MYDOS extended density sectors from DOS 2.5 with the following two pokes:

POKE 4102,234
POKE 4103,234

Robert Warren
Englewood, CO

UNCOMPRESSING DEGAS ELITE PICS

Dear Sirs:

I am currently writing an application for the ST computer which requires the loading of compressed Degas Elite pictures onto the screen. This application will be writtein in ST Basic, and then compiled with the LDW BASIC compiler. However, I am having great difficulty in uncompressing the picture files to the screen and was wondering if there was any routines, written in any ianguage, although BASIC would be most preferred, that could accomplish this. Any help you could give would be greatly appreciated.

Mathew Spolin
Bethesda, MD

TROUBLE AT ATARIFEST

Gentlemen:

You state in the December issue of Current Notes that the AtariFest was a success. More power to you, but permit me to give you another point of view.

After learning of the AtariFest through the Atari Explorer magazine, I decided to go to join NOVATARI, to find out more about the ST bought recently, and to see demonstrations in order to buy some software. I went early (10:45 AM), but once there, I found:

a. the parking lot was overflowing;

b. the area for the AtariFest was filled FAR beyond safe or legal capacity, completely overwhelming the air circulation system;

c. it was difficult, if not impossible, to get to any of the tables because of the press of the people;

d. it was impossible to be courteous and get to any of the tables; I got to the NOVATARI table by elbowing my way in and out;

e. the tradespeople were harried, swampled, and apparently ignorant of the prices of items on their taibes if the sales people's shouting of "How much is this?" was any indication -- and remember, I was there early;

f. the separate rooms were almost as jammed as the main hall, leaving little for me to see, and no one for me to ask anything of.

I left, sick and exhausted from the overage of people and lack of air and space, in less than an hour. A companion who went on my recommendation to the Fest to find out more about the STs got there earlier but was even more turned off by the mob than I, and left after only af ew minutes of being crushed. My impression, and his, was that the AtariFest was a chaotic mob of, by, and for the committed, dedicated user who already knows exactly what he has, what he wants, and who he wants to deal with.

From my standpoint, the Fest was anything but a success. With more space and more organization, I am certain more would have been learned, more would have been bought, and a better impression would have been received. You said Atari would have underwritten a Fest at a hotel, with an admission fee, over a two-day weekend. Hotels have facilities for large crowds. Why don't you try it once and see what happens? There's no way I would again knowiingly subject myself of anyone I consider a friend to anything like the last AtariFest. My friend agrees he wouldn't go again, either. It's just not worth it.

If I'm telling you a good time was not had by all, don't you wonder how many more feel the same but haven't told you? How are you measuring success?

Margot Greig
Arlington, VA

[Margo makes some interesting and important observations. Although many people enjoyed the Fest thoroughly, I am sure that Margot represents the view of, perhaps, many others. We certainly do want to plan a Fest that everyone can enjoy. To do that, we need help from many quarters. I passed Margot's letter onto NOVATARI's new president, Georgia Weatherhead. Georgia has contacted Margot who has graciously agreed to be on the planning committee for this fall's Fest. The broader the spectrum of Atari owners we can involve in the planning, the better the AtariFest will be. Planning for the fall Fest is underway already. If anyone would like to help, please feel free to call Georgia and volunteer your services. The more the merrier!]

EASTERN PENNSYLVANIA ATARI EXPO REPORT

by Dennis John

Truth in reporting disclaimer... Since I was one of the five committee members from Allentown, Bethlehem, Easton's Atari Computer Enthusiasts (ABE's ACEs) in charge of putting together last month's Eastern Pennsylvania Atari Expo, I can hardly be expected to give a completely unbiased report on the show. On the other hand, I'm in a unique position to report on the Expo from behind the scenes. With that background in mind; on with the report.

The Expo was held in Allentown, PA on the weekend of March 14th and 15th. Despite all of the problems we ran into leading up to the show, it turned out better than any of us had expected. Crowds were great on Saturday and respectable on Sunday. Over 1,600 paid adult admissions. Those 1,600 seemed to be spenders too. Almost all of the displayers reported good sales. One local dealer said he sold over $6,000 worth of Atari goodies the first day of the show.

I'll save "the problems" for the end of this piece. First, allow me to cover the highlights.

The Expo had a great lineup of seminars. Bill Wilkinson had agreed several months ago, to be our main speaker. He flew in Friday night and gave three talks on Saturday and another on Sunday. Topics included "Why learn to program?" and "Where will the software come from?"

Atari's Mark Jansen took his Atari Explorer "Question Mark" department on the road and Neil Harris also answered questions from the often SRO crowd in the Expo's 125 seat seminar room.

Additional talks were given by Atari's Dave Staugas and Art Morgan, PCA's Peter Naleszkiewicz and Frank Foster from Hybrid Arts. Subjects ranged from desktop publishing to music. There was also a talk by a principal from the Allentown School District on computers in education. (Allentown uses Atari computers at some levels.)

Visitors to the main Expo area, entered via a lobby in which they received all sorts of free Atari memorabilia. Atari Corp. must still have warehouses full of Warner Communications promotional material. Is it any wonder they (Warner) lost money? T-Shirts, back-paks, tote bags, inflatable balloon kites, snack trays, hats, mobiles, posters and on and on!

After the freebies, after the balloons, after the user group sales pitch, there was the main display area. Seven thousand five hundred square feet of display space, all of it devoted to Atari related products. One visitor asked, as he entered the hall, "is everything in here for the Atari?" When he was told yes, his response was, "My dream come true." (On the other hand, one IBM owner demanded his money back when he found out that it was an Atari only show. Since it was billed everywhere as the Eastern Pennsylvania ATARI Expo, I think we can all draw some conclusions about this man's IQ.)

The Expo had a number of retail computer dealers selling the normal selection of disks, cases, computers and software. The real fun of an Atari Expo however, is in getting to meet the actual producers of the products we use. This show had a great turnout in that area as well.

John Demar was at the QMI booth answering questions about, and actually selling *Deskcart*! All fifty units were sold out by noon on the first day but someone at QMI must have been working overtime, because a new supply was on hand Sunday morning. They too were all gone by the end of the show. A hot product indeed.

Jim Yee, from Xanth Software, was running a Midimaze tournament on his outstanding multi-player game. There were 12 STs connected for the game and on Sunday, the top player, Robbie Brooks from Weaton, Maryland, won the prize; a Casio CZ-230S and two pieces of MIDI software from Hybrid Arts.

Other interesting displayers? Ira Brickman, showing the latest from White Lion Software, Lou Schwing with the complete 8-bit and 16-bit line from Astra, Daniel Purisch was showing Diverse Data Product's ST disk drive, Deborah Elder from PCA, Liz and Kevin Mitchell from Migraph, Frank Foster from Hybrid Arts, Chester and Douglas Sensening from Sense Software, Bob Retelle and Dariah Hudson from GEnie, even Jerry "RAD Moose" Humphry was on hand.

Who else? Timeworks, ICD, Disk Publications, Michtron, Microdaft, Static Engineering, Royal Software, Analog Computing, Atari Explorer and (your favorite Atari newsmagazine) Current Notes. A BIG SHOW!

OK, I'm down to the wire getting this file to Joe Waters in time for the April issue and I promised to cover some of the "problems" with the show...

Atari was very helpful with seminars, equipment for vendors, give-aways, etc. BUT, nothing new! What a disappointment. Where was the MEGA ST and/or IBM clone prototype? All they brought to the show was a videotape. Germany? Sure! Pennsylvania? No way! How about the 1200 baud modem? Still not ready? Software? Anything?

Other "problems" included Games Computers Play going out of business between the time they booked the Expo and the show itself. Virtusonics (What we at ABE's ACEs refer to as "The world's largest producer of vaporware.") called to pull out of the show giving us all of three days notice. It seems the product that they've been advertising since last October isn't ready yet. You may recall that this is the product that replaced the program they announced almost two years ago and never released. Zoblan Controls paid for a booth but didn't show.

Despite the above, the feedback we've received from displayers and attendees alike has been overwhelmingly favorable. If you hear about an Atari Expo in your area, be sure to go. It's worth the trip, unless you only own an IBM.

[The picture below shows the main exhibit hall at the Expo as Saturday afternoon crowds view the Atari goodies. The Atari display is located under the tent in the center.]

THE ROCKY MOUNTAIN ATARI EXPO
and BEST Comuter ... and the Mac Bongo

by Dave Small

The Rocky Mountain (read, "Denver") Atari Expo was last weekend. I, along with Data Pacific, went to it.

It was successful. Atari was there, Dave Beckemeyer showed up, Supra, Astra ... many of the companies active with the ST.

For those of you who've read Current Notes awhile, and know my feelings about Neil Harris' beard, which looked like something from the streets of Lebanon during the CES show -- you'll be pleased to know his beard is now fully grown. At the seminar I hosted, I and about fifty other people gave him a round of applause for completing this arduous project. (Or, as Neil said on DELPHI: "Dave Small apologized for his comments about my beard in Current Notes..") He *is* a little touchy about it, so if you do get a chance, write him and congratulate him on it.

The most interesting booth for me was the Best Electronics booth. This is an outfit in San Jose. They sell a lot of discontinued Atari parts to various dealers.

Right there, on the sign, it said: "Eprom cartridges. Magic Sac compatible. $15. Mac ROMS: $40."

Pretending I didn't know what that meant, I asked. The man running the booth replied, "Well, you get one of my Eprom cartridges, and plug in the Mac ROMS, and use the Magic Sac software with it".

Naturally, this made me feel great. This guy was selling cartridges to rip off a year of my life.

"But I don't want to pay $40 for some Mac ROMS", I said.

"Well", he replied, "I make EPROM copies all the time. They're the only ones that work in my cartridge. I made twenty or so and sent them to friends of mine. Just let me know how many you need".

Then, he pointed to my booth, slightly out of sight behind him.

"I hear Dave whathisname doesn't like this", he said, pointing to his Eprom cartridge.

Big surprise.

Well, what could I do? Murder is illegal in Colorado.

And unfortunately, I don't know anyone at Apple to let know about this person, who is busily ripping off their operating system for his cartridge. In the real Magic Sac, only real Apple ROMS work, the idea being that somewhere along the line, Apple got income out of those ROMs, be it to a dealer or end user.

It's a strange feeling, getting ripped off like this. But the final irony was still to come. Best had another sign, complaining about a local Colorado company that had written Best Electronics a bad check. (I hope you'll understand when I tell you that I went over to this local outfit and congratulated them.)

The person running the Best booth said, "I just hate getting ripped off".

It was too strange to laugh at.

I suppose in the long run he'll get his. Someone from Apple will order up a set of EPROMs, check them out, and prosecute. Apple wasn't afraid to take on Digital Research; I can't imagine that some two-bit mail order store would be much trouble at all.

The week was off to a weird start. So then I come into the office to discover the Mac Bongo, that some kind soul in Belgium sent to me.

This is also pretty strange. The authors took a Magic Sac disk, copied the Apple ROMs to the same disk, and patched the software to remove the copyright notices. It was done in Germany, and is being given away to anyone by a user group there; it reached the United States recently.

Of course, it's breathtakingly illegal to copy the Apple ROMs.

The documentation is written in German. I found someone on the BIX network willing to translate it for me.

The Mac Bongo was *almost* posted to Usenet, an international network. The guy who posted it said, "I think Dave Small just did a cartridge to increase his profits".

How naive. The cartridge is the most expensive part of the whole package. We'd gladly ditch it if we could. Alas, the Apple ROMS are copywritten, and there's no other legal way to sell the product -- we have to provide some mechanism to get those ROMs into the computer, and the cartridge is it.

This same fellow, in Belgium, is the guy who took Atari's automatic hard disk booter, stuck his name on it, and posted it to Usenet. It then went to Delphi and Compuserve, before some at Atari recognized it as a ripoff and had it pulled.

I think sometimes of what would have happened if the Apple ROMs had been posted to a public network. It'd be like posting them to Compuserve. The term "fire and brimstone" comes to mind. Real Biblical stuff.

MacBongo has credits to several people in Germany (all pseudonyms) who did the work.

Personally, I have to wonder about anyone crazy enough to go through a program and remove a hundred seperate checks for the ROMs being physically present, which is how many I put in there. (Ten sets of ten, well hidden). What motivates people to do this? A weird terroristic urge? Hacker mania? "David Small making too much profits?"

Alas, they even picked the wrong Magic Sac to rip off. They did version 2.00, which has a fair number of bugs. Now, 3.0 or even 3.5 I could see, but 2.00? Who wants it when things that are much better are easily available?

Not that the job is competently done. Basically, when the Mac Bongo people found stuff they didn't understand, which was all the time, they deleted it. The program manages to fumble along, but crashes a great deal. What's funny is that all the crashes are the same, pretty much, and I get calls about them on the tech support line at work. My advice is also the same: Don't try to use a ripped-off Magic Sac.

The motivator is also broken. They needed the space to wedge in their patch, so they switched it off. Their documentation says, "The Motivator never worked anyway..." ha.

The Mac Bongo is being spread very quickly now; there's nothing that can be done to stop it, unfortunately. Yet I think it will disappear without a trace very shortly, like other bad ripoffs. The bad thing about the computer nets is how quickly a pirate program can spread; the good thing is how quickly news about a bad program can spread as well.

All I'd ask, if you feel like it, is to let people who have the Mac Bongo know that it is quite buggy and generally the quality you'd expect from a crude ripoff. It's also the quality you'd expect of people without the brains to realize the sort of private investigators Apple computer can afford to hire to track them down.

— Dave Small

ATARI'S SMALL MIRACLES
Ten Plus Lines This Month

by Mark A. Brown

Welcome back to Atari's Small Miracles, the column for the people who own computers. Dedicated to bringing short, possibly instructive, possibly fun, always numerous programs to the Atari 8-bit market, Atari's Small Miracles continues to show that the 8-bits are powerful and fun!

This month's column is the first to break the ten line tradition. I've been under some pressure to get rid of the ten line limit on programs. So I have...to an extent. The ten line limit still holds for most programs in this column, but I realized that in Current Notes this column is sometimes the only source of programs to type in. However, despite the number of contributers I have (which I thank!) I still write most of the programs in this column. If I were to say all programs were to be under, say, fifty lines that means that I would eventually be pressured to write more extensive programs, something I am not eager to do. The ten liners take up enough of my time. So, the majority of programs will still be SMALL miracles, but I no longer feel constrained by the ten line limit.

CYCLES

And as an example of this greater-than-ten-line policy, I'll start off with a fairly decent game called CYCLES. Almost everybody should recognize the game--you and an opponent run around an enclosed area leaving a trail until either you or he hit something, a wall or a trail, where the other person gets a point and the process starts over again. My version of CYCLES allows you to work in color or black and white (hit either C or B at the prompt), and lets you either have a two player game or a one player game (with a very tough computer opponent!) Hit 1 or 2 at that prompt.

With your joystick faithfully plugged into port one (and in a two player game, your opponent's joystick in port two), you start playing. The person in port one starts at the top of the screen. Whoever reaches ten first wins. I hope you enjoy the game as much as I have, and if you come up with any improvements (better sound effects, nicer graphics, better winning sequence, or whatever) let me know!

```
10 GRAPHICS 19:POKE PEEK(560)+256*PEEK
(561)+28,6:POKE 87,0:POKE 82,0:POSITIO
N 30,5:? "PLAYER5(1/2)";
20 POKE 708,6:POKE 709,10:POKE 710,15:
S1=0:S2=S1:OPEN #1,4,0,"K:":GET #1,P:C
LOSE #1:IF P<>49 AND P<>50 THEN 20
30 POKE 752,1:POSITION 30,5:? "B&W OR
COLOR";:OPEN #1,4,0,"K":GET #1,C:CLOSE
 #1:IF C<>66 AND C<>67 THEN 30
40 DIM A(15,1):FOR B=0 TO 1:FOR A=5 TO
 15:READ D:A(A,B)=D:NEXT A:NEXT B:IF C
=67 THEN POKE 709,70:POKE 710,150
50 POSITION 30,5:? "PLAYER1:  player┌┘
 ";:COLOR 3:POKE 87,3:DATA 0,0,1,0,0,0
,-1,0,0,0,0,0,0,0,0,0,0,0,0,1,-1,0
60 PLOT 0,22:DRAWTO 0,0:DRAWTO 39,0:DR
AWTO 39,22:DRAWTO 0,22:SC=PEEK(88)+256
*PEEK(89)
70 X1=20:X2=X1:Y1=3:Y2=19:DX1=0:DX2=DX
1:DY1=1:DY2=-1:POKE SC+248,S1+80:POKE
SC+238,S2+16
80 Z1=2^2:LOCATE X1,Y1,Z1:LOCATE X2,Y2
,Z2:IF Z1<>0 OR Z2<>0 THEN 160
90 COLOR 1:PLOT X1,Y1:COLOR 2:PLOT X2,
Y2:J1=STICK(0):IF A(J1,0)<>0 OR A(J1,1
)<>0 THEN DX1=A(J1,0):DY1=A(J1,1)
100 IF P=50 THEN J2=STICK(1):IF A(J2,0
)<>0 OR A(J2,1)<>0 THEN DX2=A(J2,0):DY
2=A(J2,1)
110 LOCATE X2+DX2,Y2+DY2,Z:IF Z=0 OR P
=50 THEN 150
120 IF DX2=0 THEN DX2=INT(2*RND(0)):DX
2=DX2-(DX2=0):DY2=0:GOTO 140
130 IF DY2=0 THEN DY2=INT(2*RND(0)):DY
2=DY2-(DY2=0):DX2=0
140 LOCATE X2+DX2,Y2+DY2,Z2:IF Z2<>0 T
HEN DX2=-DX2:DY2=-DY2:LOCATE X2+DX2,Y2
+DY2,Z2
150 X1=X1+DX1:Y1=Y1+DY1:X2=X2+DX2:Y2=Y
2+DY2:IF Z1=0 AND Z2=0 THEN 80
160 IF Z1<>0 THEN A=708:B=PEEK(A):S1=S
1+1
170 IF Z2<>0 THEN A=709:B=PEEK(A):S2=S
2+1
180 S=B-16*INT(B/16):FOR I=PEEK(A) TO
(INT(PEEK(A)/16)*16) STEP -0.1:SOUND 0
,255-S*16,4,S:POKE A,I:S=S-0.1:NEXT I
190 POKE A,0:IF S1=10 OR S2=10 THEN S=
(S1=10):FOR A=255 TO 0 STEP -0.5:SOUND
 0,A,A,A:POKE 708+S,A:NEXT A:END
200 FOR I=1 TO 100:NEXT I:FOR Y1=1 TO
21:COLOR 0:PLOT 1,Y1:DRAWTO 38,Y1:NEXT
 Y1:POKE A,B:GOTO 70
```

GTIACTIA

This next program is one tenth the length of CYCLES, and it does something corresponding less fun. It tells you whether you have the old CTIA chip (which doesn't allow graphic modes 9, 10, or 11) or the new GTIA chip. I know, you already know that information. But suppose you are writing a commercial game that uses those modes? GTIACTIA would let you know and you could print an error message depending on what you want. The program is largely useless, I admit, but it could be important to some--to the rest, it'll just be interesting trivial information filed away on your disks.

```
10 POKE 66,1:GRAPHICS 8:POKE 709,0:POK
E 710,0:POKE 66,0:POKE 623,64:POKE 532
48,42:POKE 53261,3:PUT #6,1
20 POKE 53278,0:GRAPHICS 2:POKE 53248,
0:POSITION 8,4:? #6;CHR$(71-PEEK(53252
));"TIA"
```

MAZE

Finally, a program that creates a maze. This doesn't sound too useful, and in its current incarnation it isn't. But you could easily use the algorithm (which, by the way, is from an old Compute! magazine) as the basis for a maze-type game. The maze is randomly created, different each time, fills up the whole screen, and will only have one solution to get from one only have one solution to get from the upper left corner to the lower right. It is fairly slow in BASIC, but I wrote a machine language version (which I might enclose in a later column) that fills up a much higher resolution screen in the blink of an eye.

```
100 DIM A(3):GRAPHICS 0:POKE 82,0:POKE
 752,1:? :A(0)=2:A(1)=-80:A(2)=-2:A(3)
=80:SC=PEEK(88)+256*PEEK(89):A=SC+82
110 FOR Y=1 TO 23:FOR X=1 TO 39:POKE S
C+40*Y+X,128:NEXT X:NEXT Y:POKE A,5
120 J=INT(4*RND(0)):X1=J
130 B=A+A(J):IF PEEK(B)=128 THEN POKE
B,J:POKE A+A(J)/2,0:A=B:GOTO 120
140 J=(J+1)*(J<3):IF J<>X1 THEN 130
150 J=PEEK(A):POKE A,HL:IF J<4 THEN A=
A-A(J):GOTO 120
160 GOTO 160
```

Atari's Small Miracles is looking for good programs for publication, and now the program will be looked at regardless of length (but keep it reasonable!) Under ten lines I'm willing to type in, but if it gets too large send it on a single density disk (with a self-addressed stamped return envelope if you'd like it back). Send listings and disks to: Atari's Small Miracles, c/o Mark A. Brown, 7097 Game Lord Dr, Springfield, VA 22153. I'll see you in the next issue!

ACCENT ON BASIC COMPUTING

Creating a Database

by Ron Peters

This month I'd like to address a subject that's not so much a point of widespread confusion as it is an area where most people say, "I never thought of it like that before." That is, how the computer electronically handles a filing system that heretofore was worked out on a sheet of paper.

For those of you that have not had the pleasure (?) of setting up a database file on your computer, the following remarks may not make a lot of sense. However, my wife says this is one of my strong points, so I'll continue.

For example, let's say you are responsible for setting up the membership registration for your favorite volunteer organization. In this case, we'll use a typical school PTA for purposes of demonstration.

At the Back to School Night function, you are required to set up a table in the hallway so that interested parents can join and pay the measly $25 annual dues (we won't memntion the "gorilla" you've hired to apply peer pressure on reluctant joiners).

Your first task is to design a form for parents to fill out at registration. The form should contain all the pertinent data that the PTA will need for their purposes, as follows: date, full name (Mother & Father), address, telephone, name(s) of child, age/grade of child, willingness to volunteer (the "gorilla" helps here, also).

So, let's layout the above items on a form in a logical format:

```
**************************************************
          POTAWOTOMY HIGH SCHOOL PTA
           1986 - 1987 REGISTRATION

 DATE:   __/__/__
 PARENT'S NAME: _____________________
                _____________________
 STREET:        _____________________
 ZIPCODE:       _____ TELEPHONE: ___-____
 CHILD'S NAME:  _____________ GRADE: __ AGE: __
 CHILD'S NAME:  _____________ GRADE: __ AGE: __
 WILLING TO VOLUNTEER? _ YES  _ NO
 (careful how you answer this)
**************************************************
```

When the items are placed on the form, consideration has to be given to where each item should be located so that information can be easily retrieved when you have to thumb through a stack of forms. Also, you have to make a decision as to how much space will be allowed to write in information for each item (in effect, the length of the line following each item).

Thus, assumptions were made to allow 26 spaces (count 'em) for each parent name, 5 spaces for the zipcode, 7 spaces for the telephone number (with a dash in the middle to facilitate entry), 2 spaces each for the grade and age areas, and finally, one space for the "yes" block ("no" is not acceptable).

You are also expecting alpha (letters) data in the name spaces, alphanumeric (letters or numbers) in the address space, and numeric only data (numbers) in the date, age, grade, zipcode and telephone spaces. You'll accept anything (check mark, circle, coffee stain, etc.) in the yes-no spaces -- as long as it's a "yes."

Also, notice that the "date" item has slash lines to inform registrants that this information should be recorded in the month/day/year (e.g. 10/15/87) format.

Thus, you are defining how much information will be allowed for each item, and in what format.

When you set up a database file, you go through much the same process as you do in designing a form on paper: what items (FIELDS) will be in the file, how long the line for "writing" information for each field (FIELD LENGTH) will be, and what type of information should go into each field (TEXT, NUMERIC, DOLLARS, etc.)? This is called setting up the record format -- that is, the format or structure for each form (RECORD) in the file.

The beauty of a database filing system over our manual form is that we can set up our database file to automatically "edit" on entry -- that is, the program will check to make sure that you don't put numbers in areas where text is required (name, for example). You'll always find one or two people that will try to put "yes" in the date field, or "To Be Announced" in the child's name field.

A database program will also allow you to specify what item(s) should be at the "top" of each form (sort or key field), so you can easily sort or retrieve individual forms. Try hand sorting a stack of 200 forms by date, zip code, or child's name. A good database program can do this in a matter of seconds. Your "gorilla" might take all night.

Thus, setting up a database file is the electronic equivalent to doing a form layout on a piece of paper. However, the database program will let you change your mind during this process without leaving a mess of erasure marks or a wastebasket full of scrapped layouts.

FLIGHT SIMULATOR II SCENERY DISKS
San Francisco & Bay Area / Tokyo & Osaka

Review by Ron Peters

I was somewhat surprised to get *Flight Simulator II* this past Christmas -- I say "somewhat" because actually I bought the program myself and then suggested that my wife put it under the tree with my name on it. (It worked!)

I have enjoyed the challenges of the program, in that it is almost a complete tutorial on flying and navigating a small, single-engine aircraft. Therefore, I was quite happy to get the opportunity to review two of the recent scenery disks from subLOGIC.

While the *Flight Simulator II* program comes with a scenery disk for Chicago, Los Angeles, Seattle and New York (including the Boston area), you can only buzz Martha's Vinyard so many times before the natives get restless. Besides, I've always wanted to fly to Japan.

The scenery disks, like the original program, come in an attractive package and are well organized. Each disk package contains a manual for that disk, a tab sheet (for inclusion in a notebook), an airport directory chart (containing airport names, navigational communication (NAVCOM) frequencies, airport tower frequencies, ILS (flying by instruments rather than visual) runways and ILS frequencies. The manual also contains runway charts (and appropriate frequencies) for each airport contained on the disk. These materials have been 3-hole punched so they can be conveniently stored in a binder (which subLOGIC also happens to sell).

For example, the Tokyo disk contains 14 airports (from Atsugi to Yokota, including Tokyo International) and 56 VOR and Non Directional Beacon frequencies. Thus, you can fly around the entire area completely by instruments and in the dark. However, I don't recommend this except for the very accomplished, or the insane.

So, let's go to Tokyo. After you boot up the *Flight Simulator II* disk, you pop in the scenery disk and hit [Control] E to let the program know you are changing locations. Then, by hitting the [Escape] key, you bring up the editor menu which allows you to plug in the coordinates for Tokyo International Airport (for example). So, type in 18201 for the North coordinate, and 32787 for the East coordinate. Don't forget to set the altimiter, in this case 12 feet), or you'll be in the drink. Really, very simple.

Now, you are on a runway at Tokyo International and you can take off and fly around and see the sights.

The San Francisco scenery disk is very similar in operation, and covers an area from San Jose to Scaggs Island (neat sounding place). Again, once you plug in the North and East coordinates for any airport in that area, you can fly around and land at any other airport, or just view the terrain.

Now we get into the area where I think the scenery disks are lacking. Namely, the scenery. The "sights" and the "terrain" are not too spectacular. The graphics (and scrolling) are definitely not arcade quality, and it is difficult, if not impossible, to find any landmark without using the radar feature or by just dumb luck.

I was about one-half mile from the Golden Gate Bridge before I knew it was a bridge. While I was there, I decided to fly under the bridge, but wouldn't you know it, my engine got fouled from the salt spray (my luck) and I went for a swim.

Now, please -- I'm not complaining. Considering what subLOGIC packs into 64K, the program and the scenery disks are masterpieces. But, don't expect to fly around Tokyo and pick out the Datsun (oops, Nisan) billboards.

The Tokyo disk contains the downtown area (with Tokyo Tower, Palace grounds and canal network), Mt. Fuji (I found it!), and the Shin Kansen bullet train network. In my opinion, you need a lot of imagination to enjoy sightseeing this way.

However, I highly recommend the *Flight Simulator II* program and the scenery disks if you want to learn about flying a small plane, and get a kick out of taking off from San Francisco and landing at Sausalito. The realism of the program in terms of the accuracy of mountain, river, airport and major landmark locations is amazing.

subLOGIC offers 12 scenery disks that cover the entire continental United States, plus additional scenery disks on other parts of the world. Thus, it's possible to take off from Logan International (in Boston) and navigate your way cross-country to LAX (Los Angeles). How you get from LAX to Tokyo is another matter.

In my book, Flight Simulator II and the scenery disks are winners. I would recommend them to anyone with an interest in aviation.

TIPS 'N' TRAPS

by Jim Stevenson Jr.

I've built up quite a library of questions over the months, here, and it's time to unload them all. Unfortunately, those of you who have called me up to ask me questions, I accidentally lost them, on account that you called me while I was sick with, yes, chicken pox! So if you could call me back, and restate your queries, I'd really appreciate it. And remember, any questions? Stuck in a rut?

```
*******************************************
* 1) ARMUDIC.............(703) 569-8305 *
* 2) ELECTRONIC AGE.....(703) 620-0851 *
* 3) MERLIN'S LITTERBOX....(703) 250-7303 *
* 4) ME (JIM).............(703) 378-4093 *
*******************************************
```

ULTIMA III

Q. I found the mark of kings, and know where the mark of snakes is, but I can't locate the other two. Also, what are the cards for?

-Dave Bell

A. The mark of fire can be found within the following dungeons: Perinian Depths, Fires of Hell, and Mines of Morinia. The mark of force can be found in Fires of Hell and Doom. Also make sure you visit the dungeon of Time to find out info about the cards

-Jeffrey Hand

ULTIMA IV

Q. I cant find the runes. I have about five of them, and only like three chant things.

-"Powerslave"

Q. What are the best tarot cards to pick at the begining of the game?

-"Sci-Fi"

A. Just be yourself. I think you'll like the choice.

-Brett C. Lynch

PLANETFALL

Q. What is the dial to the time machine in PLanetfall supposed to be set to? Or does it do anything at all?

-"Red Baron"

MOON MIST

Q. Where is the Morgue in the game? Is it by the ocean? I've mapped everything. Whats the number to the Morgue? Also, where's the ghost?

Bill Mehojah

SORCERER

Q. How do you get out of the house? I got all the scrolls and spells, but what then? How do I escape the chamber of living death?

-Bill Mehojah

CRASH DIVE

Q. In Crash Dive, how can I open the locked door? What is the purpose in the Sonar sphere room? How do I kill the traitor in the fan room? I got the game all mapped out but can't solve it!

-Yong-Tae Kim

A. You drop the radioactive box into the fan room with the traitor.

-"Bruce"

EMERALD ISLE

Q. In Emerald isle, how can I explore the cave without being eaten by ghouls? How can I get the board from the rundown shackle? Also, what about the knotty wood on the sand dunes?

-Yong-Tae Kim

ALTERNATE REALITY

Q. Does anyone know how to get a job in the city?

-Mike Benson

Q. I don't know where to get the Crystal Plate and the Flamesword.

-"Prince Kheidar"

HITCHHIKER'S GUIDE TO THE GALAXY

Q. I have 4 pieces of fluff and I know that you have to plant the fluff in order to open the hatch, but I can find no place to plant them. I thought that when you turn the missles into a whale, a bowl of petunias also appears.

-Vincent Laviano

Q. Does anyone here know how to activate/use the improbability drive. I plugged it into the panel, and the vector plotter in to it and it does nothing.

-"Hannabal Smith"

A. I think you need the golden apple. Heart of Gold is the key tool. Use it to escape.

-"Flaming Carrot"

BLADE OF BLACKPOOLE

Q. How do you get past the man eating plant and what are you suppose to do with the boat?

-"Hot Rod"

WIZARDS CROWN

Q. I need the key to the other areas and can't find one, or any rings. Where do I look, who do I fight?

-"Powerslave"

A. The key is in an ruined building just out side the first city. To get it go out of the city and hang a right(left if your looking at it top to bottom). You will find a ruined building, go in and find the cells, then go in the one with the skeleton in it and get the key , (it's in the skeleton)

-Marty Chandler

NINJA

Q. What are you suppose to do on this game? I killed everyone, but then it justs starts over. Is that all you can do?

-"Rodster"

A. On Ninja, when you kill everyone on the first level go to the Shijo Entrance. Look up at the ceiling. There should be a black square. Go under it and push up. You'll then go to the next level. When you kill the men on that level find the room with the black square and push up.

-"Raven"

MERCENARY

Q. I think the object is to get off the planet. Does anyone know what to do with the stuff you pick up while you're underground? I've found the inter-stellar ship. Has anyone found a novadrive?

-"Buckaroo"

LEATHER GODESSES OF PHOBOS

Q. Well, I've gotten everything I was wondering about, except a way through the catacombs, but I know how to do that, it's just a matter of doing it correctly. How do you kill Thor, not to mention in time to save the girl, and how do you get back to Donald Dock in order to get to the exit shop to buy one. (I've gotten the one marsmid coin)

-"Nino Greasmanelli"

SPELLBREAKER

Q. How do you get the cube from the idol in The Temple? It's probably really obvious, but I've drawn a blank.

-Sam Wright

Q. How do you get the opal eye from the idol? Where do you fly the carpet? Oh, also, what is the volcano fragment for?

-Sam Wright

TRINITY

Q. How do you move the sundial and even stop it? I know you can spin it randomly, but that doesn't do much good.

-Sam Wright

HACKER II

Q. What commands can you give to the Hacker II MRU's when facing a file cabinet?

-"Max Quordlepleen"

DALLAS QUEST

Q. How do you get a flashlight so you can go thru the trap door in the trading post?

-Bruce Duewer

A. In the trading post, look behind the curtains. You will find the flashlight there.

-Jim Stevenson Jr.

THE PAWN

Q. Does anyone know what to feed the dragon? Also, how do you get past the double doors?

-M.C. Fresh

A. You shine the white on the gnomes, or hobbits, or whatever they are and then point to them. I'm not sure how to get past the doors. You do need to deal with the devil...

-"Nino Greasmanelli"

PHAROAH'S CURSE

Q. Does anyone know how to get beyond level one in Pharoah's Curse? There's supposed to be a secret code word but I don't know what it is and I haven't been able to find it.

-William Perry

MINER 2049

Q. Wasn't there a way to jump to higher levels? Does anybody remember how? I would appreciate the information.

-Manuel Fiadeiro

A. Try this. On the first station, move the man to a safe spot and then type in the phone number that was on the title screen. Then, whenever the "prepare for station" screen appears you can press shift-3 to jump to station 3, or shift-anynumber to jump to any station. You only have to type the phone number once.

-Bill Godfrey

ASTRONOMY PROGRAMS FOR THE ATARI
Space Base and the Atari Planetarium

Review by John W. Godbey

It is hard to imagine a better match than micro computers and amateur astronomy. Calculations that were out of the question for amateur astronomers just a few decades ago can now be performed in a few minutes on a home computer. For example, in the late 1940s one of the most powerful IBM computers available was used to calculate the positions of the planets Jupiter through Pluto with greater accuracy than had ever been done. It was estimated that these calculations would have taken a human working with a mechanical calculator 80 years to perform. The IBM computer required about 120 hours to perform them. Just a few years ago essentially the same calculations were done on a TRS-80 in less than ten and a half hours! (A complete description of this experiment can be found in the April, 1984 edition of Sky and Telescope.

If the home computer is an Atari, with its graphics ability, it should be possible to get truly amazing results. Yet in spite of the obvious potential, until recently no commercial astronomy programs were available for the Atari. One or two programs have been published in Analog, and there are several disks of public domain programs in circulation. Yet compared to the amount of quality programs available for almost every other make of home computer, the Atari situation has been shameful.

Recently however two commercial programs have become available: *Space Base*, from Antic software for $19.95, and the *Atari Planetarium* from Atari, for $24.95. While I'm sorry to report that *Space Base* is merely acceptable, the Atari *Planetarium* is a first rate program that can be highly recommended.

SPACE BASE

This program calls itself an "electronic sky atlas & catalogue," and that is a good description of it. When loaded, the screen displays part of a map of the sky over which one can scroll using a joystick. According to the documentation, the map displays 280 stars and 109 "deep sky" objects (nebulae, galaxies, star clusters, etc.), or about 400 objects altogether. By scrolling around the map you can position the objects between two dashed lines. If you then press the button on the joystick, the sky map disappears, and the computer reads in information about the selected object from a data base on the disk.

If a deep sky object was selected, the screen display gives information as to the kind of object, its distance from the earth, etc. Another push of the button takes you back to the map. If you selected a star, you are told its name, position, color, motion relative to the earth, etc. Another push of the button and the screen will display a Hertzsprung-Russell (H-P) diagram (a plot of luminosity vs. color) of the 280 stars in the data base, with the selected star blinking. Another push of the joystick button and you are returned to the main map.

I don't believe many people will find this a useful program. First, the basic information it gives about the stars can be found quicker and in more detail in numerous easily obtainable reference books. The advantages that a computer might have over the books -- e.g., custom graphic displays or calculations tailored to a particular time and place -- are not part of this program.

Secondly, the map cannot be easily used to identify stars in the sky -- it is a rectangular map of the entire sky, with no way to orient yourself to your particular location, or time of year. Even people who know the night sky fairly well will find it difficult to locate specific stars or constellations.

The program disk is not copy protected. As is usual with Antic software the documentation is a file on the disk which must be printed out. I would rate the documentation as good. It clearly describes how to use the program, and it contains enough basic astronomy information to make the program meaningful. There is no provision for printing either the map or the data base. The program cannot be operated without a Joystick.

If this were the only game in town it might tempt Atari users; but with the exception of the H-R diagram, anything this program can do can be done better by the *Atari Planetarium*. For just a few additional dollars you can get a much, much better program.

THE ATARI PLANETARIUM

This program does so many things and does them so well that they cannot all be covered in this review. I will try to give enough detail to show the versatility and scope of the program.

Basically, this program performs all calculations necessary to enable a person to identify or find the sun, moon, planets, constellations, and a large number of stars and deep sky objects. Their locations are given both in celestial coordinates and in elevation and azimuth. But the beauty of the program is that it not only gives you the "numbers", but a visual re-creation of the sky as viewed from any point on earth from 10,000 years ago to 10,000 years in the future. If I want to know what the sky looked like over Giza, Egypt, in 2700

B.C. when the Cheops' pyramid was built, I just enter the appropriate data, and the *Atari Planetarium* displays it (see figure 1).

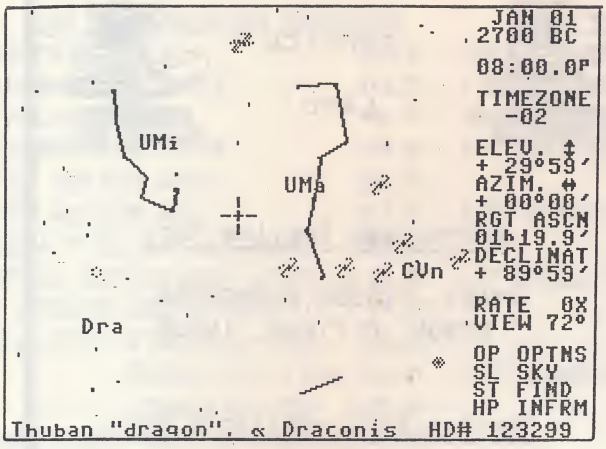


Figure 1: Sky Map over Giza, Egypt in 2700 BC.

When the program is booted up it displays the southern sky as seen from Washington, D.C., on January 1, 1985. The right quarter of the screen gives information as to the date and viewing location. At this point the [Select] key can be used to choose any of four screen modes.

The MAP MODE displays a map of the earth, and by using either the joystick or the arrow keys a viewing location on the earth is selected.

The SET MODE allows you to choose a date and time of observation. You can then go to either the SKY mode or the CHART mode.

The SKY MODE displays the sky in any direction for the location and date and time chosen in the MAP and SET modes. For example, if I wanted to know that the sky would look like from Washington, DC, on Oct. 3, 1986, at 2:25 PM I would enter this information in the MAP and SET modes, and then switch to Sky -- and could see the display of the partial solar eclipse that was visible that day (see figure 2). If I wanted to see the sky in some other direction, I could "slew" the display around with either the joystick or the arrow keys, or by keying in the compass directions. The direction is always noted at the bottom of the display, and the relevant information as to location and time at the right.

If I want a hard copy of the display, either to take outside to help in identifying some heavenly body or just for my records, I press [shift] and [P] (for my Epson printer), and the screen display is printed. (On my RX-80 the printing time is a little less than three and a half minutes, and the print out is 6 1/2 by 11 inches.)

Suppose I want to see how the eclipse would look from beginning to end. By using the [<] and [>] keys I can set an internal "clock" to make the display go forward or backward in time.

The program display has a number of nice touches. For example, if you are "watching" a solar eclipse the background gets lighter and darker as is appropriate for the amount of sun that is covered. The display normally shows lines connecting stars in the constellations, and gives their names, and displays symbols for the planets. However, each of these displays is optional and can be toggled off. In addition you can toggle on a display of deep sky objects. Finally, you can change the viewing angle from 72 degrees to 9 degrees.

If the cross hairs are placed over an object and the [HELP] key (or joystick button) is pressed a brief description of the object will appear on the bottom of the screen. The description can be scrolled across like a banner without disturbing the sky view.

Many of these options can be seen in the print out of the sky over Egypt. In this display the constellation lines and names were turned on. At the bottom of the display is the beginning of the description of the star in the cross hairs -- the entire description reads: "Thuban 'dragon' alpha Draconis HD# 123299 3.7 magnitude, spectral class A0 (var), 181 light years distance. Pale yellow color, Pole star when the pyramids were built." This is typical of the type of star descriptions you get. The planets and more famous celestial objects get a more detailed treatment.

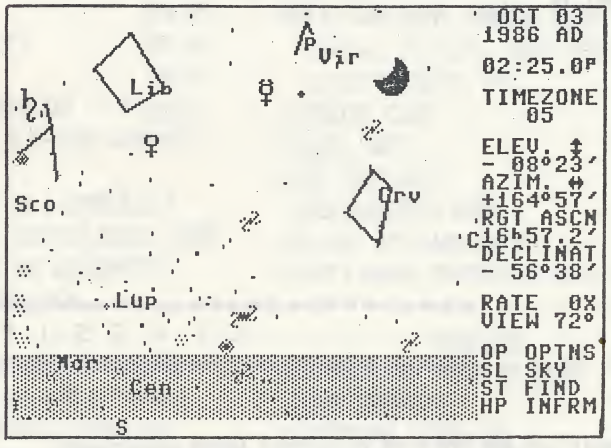


Figure 2: Sky Map from Washington, DC on Oct. 3, 1986 at 2:25 PM

Finally, the CHART MODE is a map of the sky with celestial coordinate lines drawn on it. This will probably be the least used part of the program. If someone needs sky charts, they will need something with more accuracy than this.

The program displays over 1200 stars, 300 deep sky objects, and all of the planets. The program is fairly accurate over a period of about 20,000 years. The owner's manual is 115 pages, and a model of what good

documentation should be. It has a fold out command key table for reference to the many program features. It describes clearly and in detail how to use all of the program's features, it gives the meaning of all the astronomical terms used, and it explains numerous basic astronomical concepts. Throughout there are clear and interesting examples to illustrate the concepts under discussion -- for example, it tells how to re-create some famous historical eclipses, or the "star of Bethlehem", or the "Jupiter Effect." At the end are technical notes on the program for those who are interested, various tables of information which might be useful for program users, and a bibliography with several dozen entries.

CAUTION: THIS PROGRAM WORKS ONLY ON XL AND XE COMPUTERS. IT WILL NOT WORK ON THE OLD 800s. [*Editor's note: I also believe it's formatted on an Atari density-and-a-half disk and requires an un-altered 1050 drive to boot.*] The program comes on a double-sided disk, which is copy protected. (This is a shame since this disk will get a lot of use -- it must be turned over once every time you use the program -- and given the quality of the documentation, I doubt that many people would be satisfied with a bootleg copy.) Every command can be done without a joystick, but many of the most common ones can also be done with a joystick.

I highly recommend this program. It is a first rate educational program. It is obviously of use to those who are interested in Astronomy. It will be of use to anyone who ever looks in the sky, and wonders what some object is.

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MUSIC, MIDI, AND YOU
Dr. T's KCS and Synchronization

by Mike Lehr and Grant Slawson

It is a pleasure to introduce Grant Slawson, who is going to be a main contributor to this column. Grant is a free-lance saxophone and keyboard player in the Washington area and has been playing professionally for 16 years. He also owns and operates a professional recording studio in Gaithersburg, Md. with a very extensive, ST based MIDI system. Grant's ATARI ST is a key equipment item which he uses to arrange music and engineer recordings for his clients. Obviously, Grant is very qualified to write about MIDI and is a big asset to the ATARI user community.

•

This month's column contains two articles. The first is Grant's review of Dr. T's powerful sequencer program; the second, a tutorial I wrote on synchronization in home systems.

Mike Lehr

DR.T's KCS SEQUENCER -- GOOD MEDICINE!

Review by Grant Slawson

I have been playing music professionally for 16 years, and it has been my avocation since the age of 5. I became very involved in MIDI and all its ramifications about three years ago when I was trying to figure out how to get four musicians to sound like six or eight on stage in a live performance. As I became more adept at MIDI set-ups and layering sound, I started using sequencers on stage to enhance the sound of the band without adding personnel, which brings us to the meat of this article.

Through my new friend, Mike Lehr, I was chosen to review the *Dr. T KCS* (Keyboard Controlled Sequencer), and I have now used it for 20 hours in my studio, and even given it a baptism of fire on a live gig. Previous to using this sequencer, I used two sequencers that are strictly for that use: the *Yamaha QX-21* and the *Korg SQD-1*. These are both 2-track recorders that can edit into the measure, but no further, and are designed for live as well as studio use. NO CONTEST! The *KCS* is a Ferrari and the other two units are Pintos in comparison. This is the type of recording power many of my colleagues and I have been waiting for. The *Dr. T KCS* gives me even more flexibility in my studio than a 24-track recorder, and allows me to do things after a passage is recorded that are impossible to do with tape. I have turned out 4-track tapes with as much instrument layering and overdubbing as a 16-track machine, without ever having to bounce from one tape track to another, thereby creating very high quality recordings without the expense of large multitrack tape decks. Now let's get down to the fine points of this professional quality recording studio for your Atari ST computer.

The *Dr. T KCS* is designed with the professional musician in mind, and it requires a certain amount of musical knowledge to get the most out of it. The way the program lists the notes or "events" is in letter and number notation in place of actual notes on a staff. (This is very common in all high-powered sequencers for computers, as the process of turning all this information into notes on a staff is a whole other program, which Dr. T is presently working on). The user is not required to be able to read a musical staff, but is required to know the names of the notes being played on the keyboard if he or she is to use the editing facilities which are the heart of this program. A middle C, for example, is listed as a "C 4", and the C an octave below is a "C 3", etc. The program also reads all accidentals (sharps and flats) as sharps and notates them accordingly, so a B-flat is listed as an A-sharp, or A#. If the user doesn't have the musical knowledge to understand this terminology, then editing the tracks or sequences is almost impossible. One very positive point about all this high-end notation: if you have a working knowledge of music and the names of the notes, this can be a wonderful teaching aid and you will learn quite a bit about writing music with it.

The editing process is tedious, and although I am well versed in the use of sequencers, it took me four or five hours to edit each song I recorded. Keep in mind that these songs used 6 to 10 tracks with a different instrument assigned to each track, and an average of 8,500 events per song. It has taken a lot of time to become comfortable with *KCS*, but the more I use it, the better I like it! It is very gratifying to record a passage, then go back and improve upon the work without having to re-record any of the parts. Notes can be edited for pitch, velocity (how hard you strike the key of the instrument), octave, duration and midi channel assignment. The type of events available include note on/off commands, program (patch) change, control change (modulation, filter opening), after-touch, pitch-bend and single-byte events. The timing of a single event in an entire sequence can be altered, or the timing of all events of one type can be made uniform throughout the sequence, or in just a limited area if you so desire. This fine tuning takes time, but it's something you just can't do with a tape deck.

The sequencer has three modes for recording and a myriad of playback options. The record modes share some capabilities with each other, so I will give you a brief rundown on the main function of each one.

TRACK MODE enables you to record in real or step

time on 1 of 48 available tracks, just like a tape machine. All forms of editing are accessible in this mode.

OPEN MODE also allows recording in real or step time, but allows you to record each of your parts as a seperate sequence. This enables you to change tempos in the middle of your sequence, as well as recording repetitious passages and just chaining them together to form the entire line or part.

SONG MODE enables very complex arrangements using the sequences from Open Mode. You can change tempo, key, volume, and even delay the start of another segment or sequence, which I found to be very handy in live performance as it enables stops and "breakdowns" in the performance. It was also very useful in the studio when I wanted to stay at my mixer and mix two or three songs to tape without having to stop the computer, and give myself time to change my settings on the mixer.

By the way, I recommend the use of a midi patch bay if you are going to use more than one keyboard and drum machine at the same time. I experienced a time lag during recording using two synthesizers and a drum machine that were "daisy-chained". The time lag disappeared when I rewired everything through the patch bay.

The *KCS* has an extensive memory capacity with both the 520 and 1040 ST. The 1040 will hold about 130,000 events in memory and the 520 about half that. This large capacity allows the use of keyboards to record the drum machine parts and patterns into the sequencer, thereby freeing the memory in the drum machine. If you are using a velocity sensitive keyboard, like the *Yamaha DX-7*, and your drum machine can read the sensitivity, it is possible to achieve very realistic dynamics in all the percussion parts, making them feel "real". Besides saving internal drum machine memory, this procedure also eliminates some of the sync problems encountered with drum machines that do not have the song-pointer option, as the drum parts are always in sync with the track, and can be a great editing reference point for the rest of the instrumentation in the sequence.

As I mentioned earlier, I previously recorded a great number of complex songs using sequencers that were incapable of editing single notes or events, and I wanted to transfer these songs to the *KCS* when I received it. There is nothing in the instruction manual that explains the method for transferring sequences from other devices, but through trial and error, (mostly error), I found a convenient method to achieve this. Connecting the output of the original sequencer to the input of the ST, and using the Open Mode in record, you just "play" the sequence, clocking the ST with the other device. Don't connect the ST's output to any "slaves", as this seems to cause timing problems in the *KCS*, as it has to record multiple midi tracks at the same time, which it doesn't have to do when you are recording from a keyboard. After the sequence is recorded, you can edit the sequence as it stands with all the midi channels appearing at the same time, or you can dump the sequence to Track Mode, where the *KCS* automatically places the midi channels used on seperate tracks, which is a fantastic feature! The manual is very complete and easy to understand, but a table of contents would be helpful as it can be difficult to look up a particular command at a moments notice, especially when you are in the middle of editing and you can't remember if you can perform a certain function at that time.

One problem I have found is the inability to stop recording in Track and Open mode without going to the edit screen. Each time you stop recording, you are thrown into edit, which is not the most efficient way to end the recording of a track. It slows down the recording process enough to become a little annoying, especially when you make an error and want to go to the top immediately and just take it again. If you use the [UNDO] key to bring you back to the top of the track again as the manual instructs, the drum machines don't receive a start signal from the ST, and consequently are out of sync. The insertion in the program of a start cue from the [UNDO] key would fix the problem, or recording the drums on the sequencer before any other part would facilitate the same positive results.

I tested version 1.0, which is incomplete in all it's functions. Version 1.5 was slated for release around Jan. 1, 1987, and according to the instruction manual that was in 1.0, will add all the features missing in 1.0. The only one I found to be annoying was the inability to save just one track or sequence or song without re-saving all the material presently in memory. This prevents saving more than one recording in Track Mode at a time, so you need to store them in Open Mode before saving if you want a file to contain more than one song at the same time.

The editing window is designed very well, and gives you your options on the right side of the screen while the recorded material is in a box on the left. Scrolling through the track is very easy and options are provided that allow one line, half page, full page, or automatic line by line scrolling. The automatic option allows hands off viewing with the ability to pause and make notes on problems to be repaired. Very helpful in studio work where time is money!

Thus far I have not discussed recording in step time, which is the process of writing music without playing the parts in time to a click or drum machine. Step time recording is tedious and the results come very slowly. I did use it so I could let you know how it works, and I was pleasantly surprised with the ease of use built into this mode. It can be accessed with a midi controller, or the computer keyboard, and takes about the same time as editing mistakes out of a real time recorded track. Step time is useful for recording very fast passages you can't play in real time, or a highly repetitious line that must be rhythmically perfect. Hats off to Emile Tobenfeld for making this

usually painstaking process palatable.

In summary, the *Dr. T KCS* allows ease of recording, extensive editing, and enough memory to be as inventive as you want without running out of recording room in the middle of a session. Even if you don't play keyboard well, you can make fantastic recordings with this program. Features like the automatic resolution or quantizing of the attacks and releases of notes can fix anybody's time problems with the click of a mouse. Did you assign the wrong midi channel to the bass line during recording? No problem, just change it later. You can insert, delete, cut and paste, copy, reassign and rearrange any single event or large chunks of songs. Basically this is a very powerful word processor for music, and while I don't recommend it for occasional fun and games, you can certainly get a lot of enjoyment out of using it. The cost of the *KCS* is definately a deterrent to anyone who can't use it at least semi-professionally, as it costs about $200.00, but it is designed for amateur as well as professional use, and I for one am very pleased with the results. There are still a great many detailed points I have not gone into, but this is a review, not a copy of the instruction manual, as I keep having to remind myself.

Next month I will be reviewing the *Dr. T CZ Patch Editor* for the Casio CZ series of synthesizers, and if I come up with any new earth-shattering finds on the *KCS*, I'll let you know. My thanks again to Mike Lehr and Frank Sommers for this opportunity, and I look forward to being a part of the Atari community and Current Notes for a long time. If anyone has any questions as to the *KCS* or midi recording, please call me at (301)258-8985, after 11:00 a.m. Monday through Saturday; (Sunday is usually a recovery day from six nights in clubs!)

SYNCHRONIZATION IN HOME SYSTEMS

by Mike Lehr

Synchronization is a critical element of complex MIDI systems because timing is critical element of music. Consequently, the MIDI standard supports several synchronization applications, such as:

- synchronizing sequencers and drum machines
- synchronizing different tracks on a tape recorder
- sychronizing MIDI output to the audio track of a video tape.

This month I want to focus on applications most likely to be found in a home studio and video applications will therefore not be discussed. You will need to know some MIDI fundementals to understand the rest of the column, so you may want to keep handy either your favorite MIDI book, or our series of articles on "Understanding MIDI for Fun and Smart Shopping" (Current Notes, September and October, 1986).

SOME SYNCHRONIZATION BASICS

Remember that MIDI components operate in two command modes. (Remember also that the concept of command modes is not standard MIDI jargon.) Some components operate on an "as commanded" basis, carrying out instructions as soon as the instructions are received. For example, synthesizers play notes as soon as note-on commands are received.

Other instruments operate on a "clock time" basis, in which the instrument counts beats and carries out preprogrammed commands at the appropriate time. Drum machines which play preprogrammed rhythm patterns are probably the most common clock time instruments. (Newer MIDI drums can often operate as commanded also, but drums will be thought of as clock time instruments in this article.) Sequencers and tape recorders also operate on a clock time basis. The "clock" in a tape recorder counts either inches of tape or some indicator of musical time which has (hopefully) been recorded to assist in synchronization (see below).

Notice that when instruments such as synthesizers are playing as commanded, they do not count beats and do not themselves require a clock for synchronization; they just await commands and then carry them out. In fact, several instruments can play as commanded if they are driven by a single clock time device, such as a sequencer.

However, when two or more components operate in the clock time mode, then synchronization becomes a critical issue. Three essential requirements must be met by the clock time devices:

* They must count the same number of beats per minute.
* They must start at the same instant.
* They must start at the same place in a song.

MIDI uses system common and system real time messages to fulfill these requirements. TIMING CLOCK messages enable devices to count the same number of beats per minute; START and CONTINUE messages allow devices to start at the same instant; and the SONG POSITION POINTER message (SPP) allows devices to start at the same place.

Timing clocks are issued at the rate of 24 timing clocks per quarter note. At any moment, one clock time device is designated the master, and this device alone transmits timing clocks over the MIDI cable. Other devices keep time with the master by counting the number of timing clocks that have been transmitted.

Start and continue messages tell clock time devices to begin or resume play as soon as the next timing clock message is received. The major difference between start and continue is that the start message causes devices to play from the beginning of a composition, whereas the continue message causes them to resume play where they left off.

The song position pointer measures current song location in terms of the number of sixteenth notes from the beginning of a piece. Devices which implement the song position pointer store the value of the SPP in memory, and thereby "remember" the correct place to resume play after a continue message. Some devices can receive a SPP message from a master device, load the revised SPP value into memory, and resume play from the revised point. The ability to resume from a designated point is a powerful feature which greatly speeds up overdubbing or otherwise reviewing a particular section of a piece.

SEQUENCERS AND DRUMS

Many of you will want to drive your snythesizer and drum machine using your ATARI as a master sequencer. Others will eventually purchase a small portable sequencer machine and will need to synchronize your ATARI and the other sequencer. Synchronizing two sequencers should be relatively simple because both are MIDI devices. Reviewing the owner's manuals to see how each device implements relevent MIDI messages will tell you what can and can not be done with the particular components. In particular, documentation will hopefully reveal any software limitations affecting your ATARI.

If your drum machine is a MIDI device, it may also be very easy to integrate into your system using MIDI messages directly to achieve synchronization. However, many pre-MIDI drums are already in home studios or can be bought second hand at a discount. Although non-MIDI drums can not be synchronized directly, a "synch box" may solve some synchronization problems. These boxes vary in design, but most will convert MIDI timing clocks, start and continue messages into analog signals that can be interpreted by the non-MIDI drums. The synch box may also convert analog signals from the drum into corresponding MIDI messages. The major drawback of this approach is that you may not be able to implement the song position pointer, and will therefore have to start each "take" at the beginning of a composition.

MULTITRACK TAPES

Another synch application that is increasingly common in home studios is the use of mutiltrack tape recorders, some of which can be purchased for a few hundred dollars. Parts can be recorded separately on each track. Typically, a timing reference analagous to the ticking of a clock would first be recorded on one of the tracks, called the "synch track". A sequencer typically serves as the master clock when the synch track is recorded ("laid down").

Thereafter, the synch track itself is the master clock, driving drum machines, sequencers, and in turn, synthesizers. The analog output of the drums and synthesizers is laid down on tracks other than the synch track and the other tracks are mixed together. Mixing will normally free some tracks, allowing additional parts to be recorded and mixed.

Multitracking has two powerful advantages. First, the same instruments can be reused several times playing different parts with different sound settings. Second, MIDI and non-MIDI instruments can be used together to produce a final composition.

The kinds of methods used to synchronize MIDI and non-MIDI drums can be used with multitrack recorders. However, be very careful before buying a "MIDI" recorder: it may use MIDI for purposes other than synchronization, in which case some sort of synch box will be necessary.

CONCLUSION

Synchronization can be a powerful and necessary tool in MIDI studios. Among other things, synchronization allows multitracking and the combination of MIDI output with the human voice and other non-MIDI instruments. As always, purchase components carefully to assure their compatibility and suitability for what you have in mind. And with that in mind, look foward to producing the sort of outstanding music that is being created today in well-synched home studios.

ST UPDATE
Latest News in the ST World

by Joe Waters and Frank Sommers

HANNOVER WARE

European Fashion Show? -- It's getting to be like the dress salons in Paris, except that the "designer" is an American, Shiraz Shivji with the Atari label. But his backers, the Tramiels, always seem to want to show his latest designs in the halls of Europe, before having their own kind catch a glimpse. Bits and pieces are filtering back from Hannover, and there appears to be little that is changed. No TT (thirty-two bit) machine was in evidence. The "designer" is quoted as saying that it would not appear until after a long hot summer. Reportedly it will use the existing ST front end, which raised the question of having a new generation machine with old generation resolution? Per one of the designer's bosses, Leonard Tramiel, no. All current ST users can have higher resolution, providing they install a new video driver and use the DMA port. He feigned surprise that no one had done it yet.

Hotest Combo -- The eye catcher of the show, the item that received the catcalls and whistles was a full implementation of the Small Talk language, developed by Allen Fry, being run on a Mega ST 4. A memory hungry monster of a language until now it could only be run on minis. To sharpen the event, in contrast, right next store to the Atari display was Kodak showing Small Talk on their system, estimated to cost in the $20,000 range. Small Talk will require the full 4 megs and a hard drive. But truly, things beside skirts do change, and computer power is fast moving from mini to micro. Only last month you were reading that ST's may soon be used to develop Star Wars programs.

Compatibility -- Thus far Atari has been ahead of the pack in keeping new ST developments compatible with the original machines. Hannover disclosures imply this will continue. Upgrades of various forms will be available to present ST owners. These include new ROMS, the blitter chip, and likely even memory upgrades. One minor problem is that with the new blitter chip, comes the new ROMS, but what about those people who don't elect to buy the blitter but are still sitting there with the old, buggie ROM chips. Presumably that decision will be left to Atari Marketing. (Is that a division of the firm or Jack?) Also their will be an interface board so existing ST 1040's can run the coming laser printer, which will sell in Germany for 2000 DM, about $1500, including software which will emulate the Epson FX-8000. A last curious note from Hannover, according to Richard Frick of Atari, yes, they did show an Atari AT. Supposedly it does everything the IBM AT does. But not a word in press releases, etc.,?

HARD WARE

Mega, Memory, and Meandering -- Is Atari meandering around, searching for hot cosmetic market items versus the solid machines that have brought it back to prominence, if not regular mention in the press? Voices inside and outside the company are asking why the diversion of the limited engineering and development capability for the Mega ST when the new suit could have been woven for it in Japan while more serious innovative work on the phantom EST, TT and other items could have gone on here. As it stands, other than the detachable keyboard, people are suggesting, the Mega ST 2 can be created out of your current ST 1040 for about $600 or less. That's $400 for the memory upgrade and the rest for the blitter package, going to dealers, if and when, for $125. The Chip Merchant of San Diago is selling 1 meg chips for $15.95 (it takes 16 or $255) and Don Turnock (219-233-6905) states on the electronic airwaves he will do an upgrade for $150 plus chips, which totals $530 plus whatever the dealer wants for his profit for the blitter, usually 40% maximum. For a 4 meg ST 1040 that would come to less than $700. So it appears there is some validity to the question how new is the new and still unavailable Mega series. The Amiga 2000 will be out in June and the Mac II will probably also make its way into stores, both serious machines with new generation graphics. There is no question that Atari still controls the price arena, and the power, but has it taken us and itself appreciably forward since those first furious 7 months when it produced the mighty ST 520?

Hats Off Award -- Instead of buying a Computereyes video digitizer plus a video camera for somewhat less than $1500, how would you like to have an image digitizer that scans any page, any photo, text, picture or news article that will fit in and roll thru your printer. It automatically converts it into a Degas or Neochrome image that can be enhanced, colored, or moved into *Publishing Partner*? And then prints it back out on your printer. Sure, you say, Macintosh already has it with *THUNDER SCAN*, but it costs more the Computereyes digitizer. Well, lads and lasses, IMG Scan from Seymor-Radix is here, if not in volume yet, and can be ordered for $59.95. It comes complete with light pipe, plug-in unit, software and several demos. Bingo! Your ST is suddenly converted into a high res image scanner that can relocate images and print them out. You can size up or down nine levels. The resolution is reportedly several times better than the Mac's *THUNDER SCAN*, and limited only by the verticle resolution of your printer, e.g. 360 lines if you own a NEC. How does all this work? The 1 1/2" by 2" board plugs into

your cartridge slot, exactly as an external clock board or Magic Sac does. From it runs a fiber optical cable about 1/8 inch in diameter (in prototype there were two cables half that size which will be combined) to your print head. The end of the cable, the "light pipe", is clipped or taped on to the head, and requires some fiddling so that as the printer head traverses the paper, the optical reader transmits the dots to your computer screen. Activate the software program and the printer starts moving without printing anything. Presto! Once the scan is completed you see the entire image of what passed thru the printer on your screen, for further manipulation as you and your imagination dictate. Off to Neo with it to color it up for a colored pix on screen. Over to *PUBLISHING PARTNER* and back onto your printer surrounded by text.

It is still not in mass production, and right now available only at a rate of about 20 a month. Reportedly that is soon to change. By the time you read this it should be beyond the hackers-delight stage and have arrived at full potential. Obviously software to match all printers will require modification. Orders for the IMG SCAN can be placed with Seymor-Radix, P.O. Box 166055, Irving, Texas 75016. Hats off, Seymor-Radix, and good-luck.

Hard Drive Lockup - Some of you with your Supra's or Atari hard drives whirring quietly by your profligate elbows have forgotten what is was like to worry about disk space. That is until it locks up, and your mouth goes dry, your heart speeds up and a sense of queasiness besets you at the thought of reformating and reloading this devouring dinosaur. If it is but a lockup, an incompatibility between accessories usually (keep them off the drive on your floppies), there is hope. What has happened is you can't get the drive to load because of the accessory, and if you can't load the drive you can't erase the accessory. Is there a solution with out reformating or sending it back to the factory? Maybe. Try turning off the drive. Load your boot disk, install a C drive icon, if none appears on your screen. Turn on the hard drive and then double click on the Supboot.Prg in your Auto folder. If the gods are willing, your C drive directory will float to the screen, and immediate exorcism of the offending accessory will follow!.

HARDLUCK

No Answer -- Haba, just after surfacing one of its best products, *HABA WRITER II* has discontinued it 800 telephone line. Why? And Black Patch, the same. After making a serious effort to get its chaotic house in order, apparently fell too far behind in its $$$ flow chart. But far worse is the apparent loss of Batteries Included, the Canadian firm of*Degas Elite,* and *Thunder* fame, along with other stunners. They are, reportedly in receivership, in the hands of the accounting firm of Cooper and Wybrand. A ray of real sunshine? Among the bidders to buy BI, Electronic Arts is at the top of the column. That would likely redound to the pleasure of all of us, if it came to pass and Electronic Arts continued the BI philosophy of sell no software before its fine. EA's recent release of *CHESSMASTER 2000*, a wowzer! of a program in power and design, suggests they would. Word has it that IMB, the Canadian holding company that bought out BI, had stipulated they would provide certain sums of operating money. They did not; BI had keyed their production to the funding. When it wasn't there, neither was BI in its stunning, robust, former form. *PAPER CLIP ELITE*, where art though?

DESKTOP & SOFTWARE

Who's on Top -- The Hannover fair was sure to see the announcement of a new publishing program for the ST, or so the whispers had it. Wrong. None. But then neither have we seen *FLEET STREET PUBLISHER* yet either. In the in between time the Lords of the Desktop, Macintosh, was told it would receive the most powerful publishing program ever invented, an update of *READY SET GO*, which would overwhelm its current competition, and the reviews generally agreed. Then CN's reviewer of *PUBLISHING PARTNER* and true lover of fonts, Bill Price, spent 2 hours looking at the Mac program on a Mac. To his mild astonishment, (he'd been salivating for a look at the program for months), *PUBLISHING PARTNER* had more flexibility and down-right power. Some confirmation of this view comes from an extensive comparison of desktop publishing program in the February issue of Personal Computing. Facility for facility the program that came close to *PUBLISHING PARTNER* was *VENTURA PUBLISHER*. So our transparent fascination with things the Atari wasn't is gradually waning. Those of you who have tried the Magic Sac, the Mac emulator have generally concluded that the software for the ST, with specialized exceptions, is as good and better. Now the publishing software myth is beginning to fade. The same we believe is true for the IBM software emulator already out there. But until we have "the Blue Box" and can see for ourselves we may not be so easily satisfied. The point is that the ST, no matter how archly we complain about not having this and that for it immediately, is quite a remarkable machine, and performs in its own right at a level higher than the Mac or the PC.

Another Test -- This one will come in late June according to Word Perfect Corporation of Orem, Utah. The Titan of word processors for the IBM's, and in early June for the Mac's, *WORD PERFECT* will go on sale for $395 ($295 possible for the early birds). For certain people with unique requirements it may be a must but for the vast majority of you who aren't writing books, don't need indexing, footnoting, hyphenation and an instant table of contents, we wonder. Will it be 395 or even 295 times better than STWRITER? And when will the GEM version of that appear? Not we understand till a petition that is just getting started is handed to Jack Tramiel, and he is overwhelmed with the number of signatures and agrees to allocate Atari time and manpower to do it.

SDI - STRATEGIC DEFENSE INITIATIVE

Star Wars Comes to the ST

Review by Frank Sommers

Two things are abundantly clear as you lift off, up, and into Cinema Ware's initial offering for the ST. Saving the planet and the US of A from nuclear devastation via *SDI* is a glorious fantasy, if the real thing plays like this program. General Abrahamson, Chief of the Pentagon's Strategic Defense Initiative Office, might do well to play a round or two and see his country turn into burned toast as missile after missile slips past the defenses of the U.S. space station, orbiting thousands of miles above earth, and manned by the intrepid Colonel McCormic.

Secondly, Mindset, who produced the program for Cinema Ware, is acting like Compact Disc Interactive is already here with blazing graphics and rapid switches from vivid scene to scene.

The plot is simple. It is the year 2019. We have not yet blown each other up. We have deployed Star Wars, with its control center floating a distance almost equal to the circumference of the planet above it. And we have 12 *SDI* satellites positioned three-pack style above each of the four time zones, and at the beck and control of Col. Mac, who can direct their fire at incoming missiles using the *SDI* control screen, accessed from the bridge of the space station. Now if this seems complicated....imagine the real thing.

Col. Mac has a busy life, floating 23,000 miles above us. He stands at the bridge of his craft, surveying six large screens blazing above him. He must (a) check his orbital scanner to watch for attacking Soviet space ships that have entered orbit and are spinning toward the U.S., their mission to destroy the 12 *SDI* weapons stations (and they do so with great regularity), (b) he must receive messages from his headquarters, as well as from a penetration he has aboard the Soviet Lenin Space Station - (Yes, Virginia, can you imagine they built one too! Think of the ice cream we could have bought if we both had agreed to pool our money and skip the outer space cowboys and Indians.), (c) McCormic must leave the station via an airlock and go off in his space fighter to intercept and shoot down the KGB space ships sent to destroy our satellite array, (d) constantly dock with and repair the satellites, if he expects to have any chance of stopping a nuclear attack, and (e) be able to re-dock with his own station, once he receives the two minute warning signal that a Soviet launch will occur, man the *SDI* control console and destroy incoming war heads, or the toast will burn. And finally, when the call comes from the fearless Tanya, he must fly to the Lenin Station, orbiting over the USSR, successfully dock with it (no mean feat) and then with his laser pistol fight his way along the corridors to the command center and rescue the heroine spy.

If this makes for breathless reading, keeping up with the pace of the *SDI* simulation is equally frenetic. Oaths can easily escape your lips, when with less than a minute to go before you must be at your *SDI* missile console to counter the attack, you miss your docking attempt, and are slammed up against the reality that Cheyenne, or Denver or Dalas will probably be incinerated because of your's and McCormic's ineptitude.

Or if you succeed in docking, by pulsing your retro-rockets with the fire button, as you attempt to fly straight into a heaving docking collar, you can not leap into the airlock from your ship until you have repaired the lasers, engines, shields and refueled. A click will take care of the first two, but the last two take several seconds which feel like minutes, so caught up in the urgency of the problem are you.

Let it be said that the graphic simulations for each of these activities are uniquely executed. *SDI* commences with a view of the planet Earth floating in a sea of oily black ink flecked with flickering stars, this is followed by a glowing night time view of the Capitol with cars parked on the street in front, and a ticker tape message rat-tat-tating out to you at the bottom of the screen. From there, after electing to load a ram disk to accelerate switching from situation to situation, the screen brightens with Mac at the bridge and a panoply of monitors before him. A click on the one to the right of him, fills the screen with a view of earth with 12 satellites crisscrossed above it (those that are damaged blink like an angry red eye at you). A click to the left and you see both the US and the USSR with both space stations, plus fighter craft crawling up from the the Soviet station and heading your way, and you twisting and turning and jetting back and forth (much like the space figure in Megaroids). A click and you are back with Mac in the station. A coded message from Tanya trips across the screen; the XB5's are coming to destroy the satellites. A click on Mac and he pivots smartly and descends to the airlock and his own fighter. He is pictured dashing thru the 3-dimentional airlock, and into his cockpit. After gauges are brought up to strength, you're off to save the world.

The telling of the tale is almost as confusing as the doing. There is much too much to master and you sense either disorientation or frustration or both. By the time that Tanya has warned you that a strike is imminent, and you have failed repeatedly to dock with your space station, and the fighters have hammered your shields to pieces, and/or you have run out of fuel, you almost welcome the screen flipping to the view of the White House, and the teletype obituary for Col.

McCormic skipping across the bottom of the screen. Don't bother to read it too carefully, you will see it many many times if you elect to go forward and try to master the techniques required to save your country.

To avoid the frustration that might cause you to forego a challenging and uniquely executed fantasy simulation, your best advice is experiment/practice with each segment of the program, before you accept the challenge of putting it all together. Crucial in the beginning is your ability to dock, either to repair your ship, or to scamper back inside to the missile control console to blast "the incoming". A slight technique is involved, not only to center your entry but to come in at the right speed, but once this is mastered your confidence shoots forward. Satellite repair is the next art. Rather simple, it would seem to capture the wounded blinking satellite in your red rectangular aiming devise and hit the fire button and watch the repair process take effect. But as with all the functions, the time pressure intensifies the challenge, and searching for the malfunctioning satellite takes time you don't have. Then you learn that the tiny dots on the radar screen of your fighter also blink when repair is required and you can fly more directly to the repair cite. Similarly learning to destroy Soviet fighters quickly and efficiently is probably the easiest of the arts, so much so that you forget to attend to them first, not realizing that as you repair, they again knock-out the satellites.

Probably, the most important skill, the honing of your missile killing ability, is the most difficult. Fixing your sights directly on the forward part of the arching bumping missile and blasting it, takes a bit of practice. It is then you learn that if your satellites are repaired and in order the job is infinitely easier.

Once you've familiarized yourself with the tools and tasks at hand, the mission can begin. When you arrive in the *SDI* Defense Station, having reconnoitered it, you will know to first check to determine how many satellites are out and then have Mac jump down into the airlock and his fighter to repair them before warding off attackers. This routine could become boring if you had time to catch your breath. Just about the time you have repaired the satellites and shot down a dozen or so fighters, your message indicator is flashing and you are told that there are two minutes to launch time. Back inside, a dash to the defense monitor screen and the tension peaks as you strive to destroy the missiles and every other one slides by to cynderize a city. Once the attack is over and if you have destroyed 4 or 5 missiles and only 3 or 4 cities are forever gone, you will exit the control center and receive a message, "McCormick, we have gone to Defcon 2. You will have to do better." Sometimes it gets so bad the message includes the phrase, "And the President is weeping."

But the ultimate comes when you have warded off 3 or more attacks, and suddenly the message comes from Tanya to proceed to the Lenin Defense Station and save her. What hero would refuse, even though it is almost certain death? Not Col. Mac! So off you fly, dock, run thru the lock and there you are inside the Soviet Station. KGB renegades, that are trying to take control of the Station, pop up from hatches, or around corners. If you are quick and hit them more often than they hit you, there comes a pause and you dash forward toward the control center and Tanya. But not all in one dash; more like three, fighting your way every meter of ship's corridor. And as you are hit again and again, your strength fades, and hope of saving her with it. The screen changes and your obit is flashed out on the main White House screen, "McCormic was killed defending his....."

But this must not always be the result. By flying straight to the Lenin Station you can board and practice fighting your way forward. However success and getting into the control center will not afford you the ultimate moment of the simulation, unless Tanya has given you the 4-minute summons. Otherwise your entry into the Control Center will find it empty, lit only by reflected light from Earth. (Again superior graphics!)

But be not faint of heart, the ending is worth it.....they tell me.

ATARI SCUTTLEBITS

A Triumph of Marketing Over Substance

by Bob Kelly

There are two commercial Federal tax preparation programs available for the Atari ST: *Tax Advantage* and *Swiftax*. If you plan to do your taxes within these next two weeks, there is no doubt in my mind which one to choose. However, first I would like to discuss the new Macintosh computers (SE and Mac II) and a "letter to the editor" I read in an Atari magazine.

I. THE NEW MAC'S

Two new Macs were announced their vital statistics are:

• MACINTOSH SE	MACINTOSH II
o Motorola 68000 processor (16 bit)	o Motorola 68020 processor (32 bit)
o 1MB Memory	o 1MB Memory
o One 800K floppy drive Optional second floppy	o One 800K floppy drive Optional second floppy
o Built-in 9-inch monochrome monitor, 512 * 324 pixels	o Add-on video card required o 12-inch monochrome or 13-inch RGB color monitor, both 640 * 480 pixels
o Ms-DOS capable with 5 1/4" standard drives	o MS-DOS capable with 5 1/4" standard drives
o Single internal bus slot for expansion	o Six card slots for expansion o Math Co-processor chip (68881)

The MACINTOSH SE should be on the shelf by the time you read this column. It will, however, be in limited supply for the next couple of months, according to Apple. The Mac SE is an enhancement of the Mac Plus and is slightly faster (15% to 20%). The Mac Plus cannot be upgraded to an SE since the hardware changes are extensive. Apple has stated that new software eventually designed to take advantage of the special features of the SE and Macintosh II might not work on Mac Plus and older machines. The 9-inch monitor for the SE is built-in as is on the Mac Plus. The SE has two desktop bus ports to connect input devices such as a keyboard, mouse and graphics tablet. It comes with one megabyte of RAM as standard expandable to 4 Mb.

For some of us who are familiar with the Atari 1040ST, this machine sounds suspiciously similar. However, when you compare price, any reasonable comparison ends. The SE with two drives, IBM style keyboard with function keys, and standard configuration of one megabyte retails for $3,130. Assuming that in six months or so you will be able to get 20% discount, the SE will cost $2,500. An Atari 1040ST with two drives, one megabyte and a 12-inch monitor cost less than $1,000 today.

The MACINTOSH II is the long-awaited open architecture 32-bit machine. The machine operates at nearly four times the speed of the Mac Plus, according to Apple. Its configuration is much like an IBM in that it has a separate keyboard, CRT display, and computer/disk drive box. It also comes with the same standard equipment such as input bus connectors, one MB of memory, etc. found on the SE. The Mac II is designed for the business market and as such has six built-in expansion slots.

When it comes to price, the Macintosh II is certainly going to be no slouch. The suggested retail prices for the main components are:

Base price: (computer/one drive)	$3,900
Disk Drive:	300
Video/display card:	500
12 inch monochrome monitor:	400
13 inch color monitor (16 colors):	1,000
Color card upgrade:	150

When you purchase the Mac II, the monitor is a separate item as is the video display card. For a monochrome or color system, a 640 x 480 pixels display is generated. The color card upgrade for $150 allows you to display 256 colors rather than 16 colors. In sum, a 2 drive monochrome system costs $5,100. For a color system, it costs $5,850. I have not mentioned hard disks but they start at $999 for a 20 megabyte drive or a net of +$700 to the total system cost.

Apple has announced that 90 to 95% of the programs that currently run on the Mac Plus will also work on the Mac II. This may or may not be an accurate statement as it applies to commercial/business programs. However, as far as public domain or home entertainment programs, it will be a different ball game for Apple users.

Initial reaction to the new computers has ranged from full blown enthusiasm to extreme skepticism (what's new!). In any event, the skeptics center their criticism on past Apple performance of failing to get new software on the market in a timely basis. Already, Apple has announced that the Mac II would not be available in any quantities prior to the end of this summer. InfoWorld's Robert X. Cringely had an interesting comment providing one reason for the delayed introduction:

"It's new, four-voiced stereo sound chip doesn't work: It was so flaky that when Apple tried to show it off to the assembled press, it crashed the prototype Macintosh II. The crash was so catastrophic that product manager Didier Diaz, apologizing that the chip wasn't finished, had to pull the plug out of the wall because even the reset button was frozen out."

One thing for sure, for Apple to change corporate image, it will require more than a slick public relations effort.

II. LETTER TO EDITOR

A recent letter to the editor by a software producer is a classic in how not to set a price. To quote the relevant portion of the letter:

"The price was incorrectly printed as $179.95. It's actually $79.95. This will increase to $149.94 as of January 1, 1987. There will be a more extensive manual and several new features added, most notably a complete payroll program.

There has been a lot of confusion concerning the price. ANTIC reported it as $19.95 at one point, overlooking information about an increase and using the price in the original submission six months earlier."

Now, let's review the bidding. It was originally erroneously reported that the price was $180. The developers marketing the program stated the initial price was only $20. But six months later, the price increased by "400%" to $80 up until January 1, 1987. Then, a decent manual was written (boy, am I glad I didn't buy the old one) plus the addition of a payroll module and the retail climbed to $150. This represents a 750% increase over the original $20 price in less than a year! If I figured this wrong, write.

III. TAX ADVANTAGE VERSUS SWIFTAX

Everyone is hot for Sylvia Porter's *Swiftax*. It comes in a beautifully bound volume with lots of information about the program on the outside. On the other hand, the *Tax Advantage* comes in a plain royal blue cover with little, if anything said on the outside, no famous name endorsement, no indication of what the program can do. Of course, *Swiftax* has been selling in the Washington Metropolitan area like Redskin Super Bowl tickets since it appeared in mid-February. The *Tax Advantage* came along about a week or two later and has experienced lackluster sales. Timeworks/Sylvia Porter should be congratulated on their success in marketing. However, *Tax Advantage* is the tax preparation program that can do the most for you with the greatest ease. Why? Here are a few reasons.

o *Tax Advantage* can print out all of its forms in a format acceptable to the IRS on normal printer paper with the exception of form 1040. *Swiftax* can print NONE of its forms unless you consider feeding the IRS forms through the printer (lots of luck lining it all up!). If you are filling out 6 or 7 forms, IRS approved printing capability saves time plus potential transcribing errors.

o *Swiftax*'s manual is like a Dali painting - splatters of information here, there, and everywhere. The *Tax Advantage* manual is considerably better. However, both need a concise tutorial section.

o With *Swiftax*, after completing form 4562 (depreciation), results have to be moved to Schedule C (Business Profit or Loss) by hand. Can you believe it! Of course, the *Tax Advantage* will do this.

o *Swiftax*, when printing out its "draft" forms, will not skip over the line perforation on tractor feed paper. You cannot insert printer control codes. Further, my printer does not have a dip switch to prevent printing over line perforations. *Tax Advantage* has built in printer drivers for Epson FX/MX and all Star Micronics printers plus allowing custom configurations for any printer. Neat!

o *Swiftax* operates in a partial GEM environment (can't use mouse to move cursor to line numbers, etc.). Its command orientation is toward the function keys. *Tax Advantage* is fully GEM implemented.

o *Tax Advantage*, using the pull down menu, permits an instantaneous summary of the total tax consequence of any single entry (how does changing this number affect my refund). *Swiftax* can only recalculate one form at a time and it does take time.

o *Swiftax* does not permit small supplemental itemization schedules to be printed out. For example, suppose you create an itemization consisting of 5 or 6 entries detailing the cost of your tax preparation fee. This cannot be printed by the program (I ended up using a public domain screen dump program by Tom Hudson). For *Tax Advantage*, everything entered can be printed out and labeled. *Tax Advantage* also prints an "I" by each account itemized. *Swiftax* hopes you remember.

o *Tax Advantage* permits some minor tax planning. *Swiftax* has no such option.

There were two things that I did like on *Swiftax*. Ironically, they were the only items poorly implemented on the *Tax Advantage*. The major plus was the calculator. Simply put, it worked reasonably well on *Swiftax* and I never could get it to work correctly on *Tax Advantage*. The minor item was more of a nuisance on the *Tax Advantage* and it involved the procedure to set up drive B: as the data drive. *Swiftax* allows the data drive to be preconfigured avoiding the multi-step process to open a file on drive B.

Phone support for both relating to program execution was courteous and they answered messages promptly.

For the *Tax Advantage* (Double Eagle software), the calculator, data drive selection, and a tutorial for the manual should be on their "must" list of items to correct next year. Unfortunately, *Swiftax* (Timeworks software) has far more to correct but let's hope they make an effort. By the way *Swiftax* retails for $79.95 and the *Tax Advantage* for $59.95, but both have been discounted to as low as $50 and $45 respectively.

See you next month.

CURRENT NOTES ST LIBRARY

[Note: the programs on these disks are either public domain, or copyrighted but distributed freely to the public (e.g. AtariWriter and NEOCHROME), or shareware products where the authors would like an additional payment if you decide you like their products. Numbers not listed have been discontinued. Disks are $4/each. Include $1 for every 6 disks for postage. Order from CURRENT NOTES LIBRARY, 122 N. Johnson Rd., Sterling, VA 22170.]

UTILITY DISKS

#18: UTILITY #1. 34 misc. utility programs
#25: DEGAS UTILITIES. fonts, pr drivers, conversion prgs.
#30: UTILITY #2. Assembler; Forth-83; printdir; Labels...
#36: DESK ACCESSORIES. calendar, clocks, screen snapshot.
#61: PRINTER DRIVERS. First Word, ST Writer, Degas
#63: UTILITY #3. WP desk acc,floppy indexer,file squeeze.
#72: UTILITY #4. Format/copy 400K/800K;proff; desk accs..
#73: UTILITY #5. archiver; disk lib prgs; disk speed x...
#81: UTILITY #6. dir lister;quick formatter; Font Editor.
#94: UTILITY #7. print out strips of picture files,.....
#95: UTILITY #8. format Inc capacity on SS/DS disks.....
#102: UTILITY #9. bulk erase, disk format acc, disk labels
#107: ST RAM DISKS. 25 ram disks + 7 auto loaders
#113: UTILITY #10. HD backup; undeleter; format3'''
#117: DESK ACCESSORIES NO. 2. acc load, format, kalklock
#121: UTILITY #11. address bk, text browser, format.gem..
#126: PUBLISHING PARTNER UTILITIES. Helvitica + pr.driver
#127: ST FONT EDITORS/LOADERS. Font loader, GEM FONT ed.

GAMES

#21: GAME DISK #1. (Color) Megaroids, Mastermind, Othello, Backgammon, Ripcord, Target, Life, Journey.
#37: GAME DISK #2. (Color) BASIC Games(Bomber, Scratch, Switchbox), Celestial Caesers, Ripcord, Score4, Battleship, BlackJack, Mad Libs, Maze Maker, Mylife, Box the Dragon, Mastermind, hints for SUNDOG.
#39: ARCADE DEMOS. JOUST, TIME BANDITS, and CRACKED.
#54: MONO GAME DISK #1. PuzzlePuzzle
#62: HACK. Dungeons and dragons like game
#80: MONO GAME DISK #2. MONOPOOL; KRABAT Chess game.
#100: GAME DISK #3. (color) Football, Break Out, Missile, 4 Adv. Games (Larn, Magnon, Twilight Zone, & Ogre).
#101: GAME DISK #4. (color) Atartrek, Celestial Caesars (new ver.), Krabit (chess), Twixt, ST Aggrevation.
#112: GAME DISK #5. Checkers, slot Machine; Warzone,,,
#122: GAME DISK #6. Haunted House,Monopoly,Backgammon

PICTURE DISKS

#40: TINY COLOR #1. 20 Pictures
#41: TINY COLOR #2. 26 Pictures
#42: TINY COLOR #3. 24 Pictures
#48: TINY MONO #1. 17 Pictures
#51: TINY COLOR #4. 29 Pictures
#52: TINY COLOR #5. 21 Pictures
#65: TINY COLOR #6. 22 Pictures
#75: TINY COLOR #7. 16 Pictures
#96: TINY COLOR #8. 17 Pictures
#108: TINYPICS NO. 1. GHOST BUSTERS; RAIDERS
#109: TINYPICS NO. 2. EMPIRE STIKES; SHUTTLE
#118: TINYPICS NO. 3. SCI-FI
#119: TINYPICS NO. 4. VEHICLES
#120: TINYPICS NO. 5. CARTOONS

TERMINAL PROGRAMS

#4: TERM PRGS #1. sttalk(V.97); sterm; term and hiterm
#43: TERM PRGS #2. 3 compiled term prgs, 1 term emulator
#84: ST TERM DEMO DISK. Demo of V 2.1; 2 more term prgs
#88: TERM PRGS #3. UNITERM VT100 EMULATOR, Version 1.5

GRAPHICS

#7: GRAPHICS DEMO #1. 32 graphics demos.
#14: NEOCHROME. Program, docs, pictures.
#50: GRAPHICS DEMO #2. 7 SILENT SERVICE screens, demos from DUNGEON MASTER, bouncing FUJI symbol.
#64: DOLL ANIMATION DEMO. Spinning dolls demo, 1Mb-color
#66: GLOBE DEMO DISK. Spinning globe + more... 1Mb-color
#67: BALL/BIRD DEMO. Bouncing ball & flying bird demo
#77: CAD 3D ANIMATION DEMO. Fractal Mountain
#85: SOUND/GRAPHICS #2. stspeech, music player w/files
#90: SHINNY BUBBLES. Color demo shown at COMDEX '86
#104D: ALADDIN ST DEMO DISK. Stunning graphics.
#105: CN MOVIE. Make It Move Demo
#115: ANIMATOR DISK. Aegis Animator Player w/4 ARC'ed routines to play.
#128: STEELY BOINK. Ray-tracing demo.

MUSIC

#34: MUSIC ON YOUR ST. ST MUSIC BOX, Dix Piano Player
#60: MUSIC STUDIO SONGS. 50 songs for MUSIC STUDIO
#76D: SOUND DIGITIZER DEMO. by Print Technik, 1Mb, color
#78D: DIGI SOUND DEMO #1 OXYGEN (By Hypnosis) 1Mb
#79D: DIGI SOUND DEMO #2 FOREIGN AFFAIR (M.Oldfield) 1Mb
#99D: DIGI SOUND DEMO #3 MATT'S MOOD (Matt Blanco) 1Mb
#114: MUSIC STUDIO 'SNG' DISK #2. 40+ songs

LANGUAGE DISKS

#8: SAMPLE "C" PRGS #1. 17 C programs w/source
#9: SAMPLE LOGO PRGS. 30+ LOGO programs.
#22: SAMPLE BASIC PRGS. 17 BASIC prgs, command summary
#31: PASCAL & MODULA-2. OSS files, + various demo prgs
#33: SAMPLE "C" PRGS #2. 12+ C programs w/source
#49: SAMPLE PASCAL PRGS #1. 46 PASCAL files.
#53: ATARI ST FORTH-83 MODEL. by Laxen & Perry
#71: FORTHMACS Ver 1.1. (c) 1986 by Bradley Forthware
#82: SAMPLE "C" PRGS #3. 13 C programs w/source
#83: SAMPLE MODULA-2 PRGS #1. Shell for ARC.TTP +.....
#92: SAMPLE MODULA-2 PRGS #2. ST Speech Modules +.....
#93: SAMPLE PASCAL PRGS #2. spelling checker source...
#97: LITTLE SMALLTALK. language, editor, manual, prgs
#98: XLISP V1.7. language, manual, editor, C source ..
#110: MODULA-2 SAMPLE DISK #3. AES Library modules.....
#111: PASCAL SAMPLE DISK #3. source to ATARTREK...
#123: SHAREWARE C COMPILER. C, editor, ramdisks, etc.
#124: ATARI ST ICON LANGUAGE, V6.3. by Fonorow & Nowlin

APPLICATIONS

#15: ST WRITER, Ver 1.70. ST WRITER with all doc files
#29: MICROEMACS. Ver 3.7i. editor, ref man, tutorial
#59: VIP TEMPLATES. 20 VIP templates
#68: CAD 3D PICTURES. 12+ picture files for CAD 3D
#69/70: GRAPHIC ARTIST DEMO. Ver. 1.52.
#74: ST SAMPLER #1. Demos of Synsoft's Gen Ledger,

SOLAPAK, and TechMate Chess prg; more ...
#89: SPANISH ST WRITER. (c) 1985
#91: BOFFIN DEMO DISK. demo of BOFFIN word proc prg
#103: SKYMAP. 1,560 of the brightest stars.
#106: SMOOTH TALKER DEMO. 5 talking educational prgs.
#125: GERMAN ST WRITER. (c) 1986

CPM EMULATOR DISKS
#86: CP/M-80 EMULATOR TOS DISK. CP/M-80 V2.2
#87: CP/M-80 DISK #1. Disk in CP/M-80 format: 24+ prgs
#C1: CP/M-80 TELECOM DISK #1. mexst & docs
#C2: CP/M-80 UTILITY #1. 45 utility files
#C3: CP/M-80 GAMES #1. adventure, aliens, blkjak...

ST-MAGIC DISKS

These disks contain Macintosh programs for use with the Magic Sac on the ST. Disks are already in Magic format and can be used directly.

#M0: MAGIC SAC 3.5. most recent ver of MAGIC program, a beta of coming ver. 4.0.
#M1A: FINDER 4.1 STARTUP (BOOT) DISK. (This is the old M1) Altered Finder, Edit, REdit, MacLuff, System Folder (for 1-Mb STs).
#M1B: FINDER 1.1 STARTUP (BOOT) DISK. Bootedit, Life, MacWait, Desk Cal, System Folder (for 520ST or 1040ST).
#M2: TELECOM DISK #1. Free Term 1.8, Termworks, Kermit
#M3: UTILITY DISK #1. Switcher, Packit, Slicer, MacDump, RMover, Reverse Screen, DES, Font Doubler, more...
#M4: GAME DISK #1. Missile Command, Solitaire, MacLuff, Space Bubbles, Back Gammon, Smile, Bash Big Blue, Munch, Meltdown, Maze 3D, Snow, Curves
#M5: DISK LIBRARIAN. Disk Librarian Ver 1.81
#M6: GAME DISK #2. Ashes, Wall Game, Wheel, Black Box, Snake, Destroyer, Hex Puzzle, Office Attack.
#M7: GAME DISK #3. MacYahtzee, Wiz Fire, MacCommand, MacBUGS, GO, Break the Bricks.
#M8: DESK ACCESSORIES #1. DA Tester, F/DA Move, MockPrint, MockTerminal, MockWrite, MiniWriter, Moire, ArtThief, Ascii, File Hacker, more....
#M9: UTILITY #2. File Hacker, ResEd, RamStart 1.3, Font Doubler, Change App.Font, Desk Acc. Mover, MacTools 5.4, Convert Desk Acc.
#M10: GRAPHICS #1. Living Art, Pattern, Painter's Helper, Moire 3.0, Mightmare, Rotations, Ball Demo, Hot Sex, Meltdown, View Paint 1.1, Curves, Fourth Dimension, Pics:(bugs, amy, pisces, brooke, garf).
#M11: PRINT UTILITIES. Chooser, Fast Eddie, Font Mover, Font DA Mover 3.2, Ink, MockWrite, MacWrite 4.5 to Text, MiniWriter, Disk Labeler, plus 3 fonts
#M12: MACBILLBOARD. Mac Paint Clone by C.E. Software (Shareware Product). Includes documentation and sample pictures.

ANALOG DISKS

#A41 (Apr '86) anykey, mod1, mod2, mod3, mod4, sort, num2prt, strings1, stcheck, gemdemo, scratch, pics(boat, daffy, desert)
#A42 (May '86) craps, sounder2, colors512, celest, popcorn, pics(stlog41, after, davros, gerwalk, zgundam)
#A43 (Jun '86) arrays1, arrays2, calcpl, guesnum, mandel, calculat, doodler, sampler, pics(parts, circus, escher), target.prg
#A44 (Jul '86) 3ddemo, twogame, planokbd, fraction, input, funchelp, pics(fish, gorilla, porsche, stlog4, countach)
#A45 (Aug '86) ccdemo, dlxplano, image, numbers, pointer1, pointer2, superbox, st solid states.
#A46 (Sep '86) minos.acc, dx.ttp, dx.a, format+.bas, dmdemo.prg, pics(utterfy, demon, eagle1, madonna, phantom, rick1, speed)
#A47 (Oct '86) cmanship, puzzle, windows, ezsq, biclock, yahtezee, fortune.acc, pictures.
#A48 (Nov '86) stboxes, ballit, stocks, graphics, graphpro, pics(epsgem, necpro, shuttle)
#A49 (Dec '86) vdidemo, dragon, fax, poolmono, life, pics(fgordon, kolboink, porsche, wizrdc1, stlog49)

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NEW DISKS INTRODUCED THIS MONTH
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#117: ST DESK ACCESSORIES #2. acc load, eternal, format acc, index, kalklock, modzdll2, new word, startup1.1...
#118: TINYPICS No. 3 SCI-FI. alien, cybermen, darkness, davros, depspace, drwho, io, judith2, klngon, mornstar, pike, pinets, romulin, saavik, saturn, shipfire, shuttle1...
#119: TINYPICS No. 4 VEHICLES. autodes1, bicycle, boat, cvrtabl, colorcar, corvette, cycle4, express, f14tomct, f15, f15strk, ferrari, mazda, model, ninja, por911...
#120: TINYPICS No. 5 CARTOONS #1. birds, bugs, bully, circus, coyote, daffy, ddcr, disney, disnmick, duckdog, flightc1, malefcnt, martian mickey, pegy, roadrnrn, snowwhite...
#121: UTILITY DISK #11. address book, text browser, arxx, format.gem, gem font editor, font loading accessory, start1.1
#122: GAME DISK No. 6. Haunted House, Monopoly, Backgammon.
#123: SHAREWARE C COMPILER. by Mark A. Johnson. C compiler, PD ramdisks, and command line interpreter.
#124: ATARI ST ICON LANGUAGE, V6.3. ICON language (follow-on to SNOBOL4) from U of Arizona implemented by R. Fonorow and J. Nowlin.
#125: GERMAN ST WRITER. (c) 1986 bei Atari Corp.
#126: PUBLISHING PARTNER UTILITIES. Helvetic and normal fonts with 18 various printer drivers including epson, gemini, bluechip, okidata, t321f, sb1of, lq800f, smm804, c8510a...
#127: ST FONT EDITORS/LOADERS. Font loader (high-res only), GEM FONT editor, ver 1.1, and FED font editor.
#128: STEELY BOINK. Tom Hudson's latest graphic marvel, the ray-tracing demo discussed in the Sprint, 1987 START.

RECENT ST RELEASES

by Andy Nicola

Recently released ST software will be the only topic of this column. No "vaporware" and no press releases. Only real titles that have hit the marketplace and that you can buy now! These titles will be new enough that neither you nor your dealer may have heard of them. Although all titles will appear on my "Official ST Software List" which is posted on CompuServe, the WAACE BBS, and in the Current Notes Disk Library (#116), some of them will appear here for the first time. These Current Notes exclusives will allow you to be the first on your block ...

A CALC PRIME. This is more than an upgrade to the old *A-CALC* from Antic/Kuma. The programs enhancements have made it comparable to VIP in size and features and also add a 'sideways' printing capability, a wide view option that allows you to see 50% more of the work screen, and much faster screen updating than VIP. Also, it utilizes 10 clipboards for speed and ease of use of specialized functions, disk I/O, printing, etc. Antic ($79.95). Note: Version 1.0 owners may upgrade for $20.00 plus old disk and $5.00 handling.

CASH REGISTER 1.7. This is a Point-of-Sale checkout program ideally suited for small and medium sized retail outlets. Features include: auto inventory search, three pre-defined tax structures, allows manual tax entry, may be used with or without printer or cash drawer, automatically flags inventory for re-order, will issue numbered sale receipts and will account for type of transaction and handle shipping charges. A.N.D Corp. ($49.95). With cash drawer that interfaces with the ST. ($399.95).

COMPUTEREYES (COLOR). A cartridge interface that connects to any NTSC, composite, VCR, laser disk or other computer that outputs a composite video. Will operate in a 520 with all desk accessories removed. Images may be captued in Degas, Degas compressed or Neochrome formats. LoRes yields 16 colors from 512 selctable, MedRes gives 4 colors from 512 selectable and HiRes maintains high contrast black and white with 4 level gray scales. Digital Vision, Inc. ($249.95).

INTERLINK ST. This is an extremely easy to use telecommunications package. It support record/playback, 20 macro keys, chat mode, show connect time clock with chimes, word wrap and auto logon. Full disk commands including extended disk formatter. Supports Xmodem, Xmodem CRC, TELINK and ASCII file transfer. You may even execute other programs with exiting interLink ST. 48-line display option for monochrome. Intersect Software Corp. ($39.95).

INVENTORY MANAGER. An inventory control system which utilizes customs reporting and sales projections based on sales histories. The base may contain up to 40,000 items and is a stand alone application which may be ideal for small businesses. Regent Software, ($79.95).

KING'S QUEST. This is the original. The story has been enhanced, though not changed, so that all obstacles and all mysteries cannot be solved. Thus the game can be played several different times each with several options open to you. A full color map is included. Sierra On-Line ($49.95).

KRYSTAL. Desktop Publishing program designed to typeset documents on a laser printer (HP laserjet Plus or Ricih 4080R). The program will readily handle forms with lined tables and logos. It will accept existing long documents incorporating tables of contents and indices. These can also be automatically generated. General data merge is suported and there is no limit on using proportional fonts. Supports multiple columns precise proportional justification and allows manipulation of up to 16 fonts. Facilities for shading and digitizing pictures are incorporated. Softlab ($299.00).

PHANTASIE II. The long-awaited sequel to *Phantasie* has been shipped. Although you may create new characters in the stand alone fantasy-role-playing game, you may also import experienced characters from the original. Keep in mind, though, that this is not the end! Look soon for *Phantasie III* (The Wrath of Nikademus). S.S.I. ($39.95) each. Also available are *Rings of Zilfin* and *Wizard's Crown*. ($39.95) each.

PROFESSOR CRAPS. This program is a gambling odds and craps tutorial. Helps develop real strategies and contains a unique student mode. Comes with a 30-day money back guarantee! Scorpio Systems ($49.95).

PROLOG. A full-featured implementation and development tool for AI applications and expert systems. The system utilizes the Edinburgh standard syntax, and is compatible with most of the popular tutorials available. There is an EMACS-style editor included to facilitate the system's interpreter. Included also are a full complement of GEMDOS primatives and interfaces to the VDI and AES. The system is not copy protected and user written applications are free of licensing agreements. Rational Visions ($39.95).

PROLOG DEVELOPMENT. This package is complete with example expert systems and a 500-page manual. It was ported from a VAX mainframe version and may be the first 'true' implementaion of the language for the ST. LogicWare ($199.95). Disk and book tutorial available for ($49.95).

Sylvia Porter's SWIFTAX. 18 separate tax schedules are incorporated into the program. All that is required is to choose the proper form and fill it in. Help screens are provided and the book Sylvia Porters' 1987 Income

Tax Guide is included. The program disk is not copy protected and data disks are specially formatted from with the program. Timeworks ($79.95). [*Editors Note: see separate review as well as Bob Kelly's comments elsewhere in this issue.*]

ST COMM. Another easy to use terminal package that utilizes all the standard transfer protocols and uses auto dialing from memory or library. 10 programmable function keys and full VT52 emulation including cursor keys. Jerry Halgwood Software ($34.95).

TRIMbase. A very simple to use data management system that allows handling of tremendous amounts of information. Relational operations make files smaller and easier to handle. Merges may be made from one form to another with identical records, and files may be joined to create even larger format layouts. Michtron ($99.95 introductory) ($149.95 List).

VT 100 EMULATOR CARTRIDGE. This VT 100 emulator includes all features except the 132-column screen mode. User definable keys, configurable terminal characteristics, session recording and playback and bidirectional file transfer. Atari Corp. ($49.95).

ZORK TRILOGY. This is a compendium of the ZORK series. All three adventures are included here in a specially bundled package. Infocom ($69.95).

RELAX AND ENJOY

Two Indoor Sports: Bowling and Monopoly

(c) 1987 by Joe Kuffner

Welcome to the month of cherry blossoms, warm weather and the coming out, so to speak, of those of us who've been using the winter as an excuse to hibernate at our ST's. No more flimsy excuses for devoting hours of leisure on the computer. Well, we'll just have to come up with a really, good reason. And, it just so happens, I've come across a couple of VERY GOOD reasons!

• This month, I'll be taking a close look at Access Software's *10th Frame Pro Bowling Simulator*, which is so much fun that even if you hate bowling (I did!) you'll love this sports simulation. I'll also be continuing my coverage of public domain entertainment software, which I'll put under the heading, PD-of-the-Month. This month's winner is a computer version of Parker Brother's *Monopoly*, programmed by David Addison.

10TH FRAME: PRO BOWLING SIMULATOR

10th Frame is a new release from Access Software, Inc. (of *Leader Board* fame) and continues the company's series of sports simulations. I must admit that I thought bowling wasn't for me, but I'll tell you, after playing *10th Frame*, I'm tempted to say that bowling is for everyone.

When you boot up the program disk, AFTER inserting the security key (Access Software's form of protecting its software from illegal copying), you are presented with a color title screen of a bowler in action (it looks digitized, but I'm not sure) and a passage of digitized music to get your bowling "juices" flowing. After the loading is complete, you are presented with the bowling lanes and a choice of player options. You may compete in league play (up to 4 teams), or open competition (maximum of 8 players), at any of three skill levels, Kids (no skill required), Amateur (beginner level), or Pro (most fun and challenging).

You may use either the keyboard or the mouse for setting up the player options. The keyboard seems quickest, especially for entering the players names, but the inclusion of the mouse for input will certainly be appreciated by those not familiar with keyboards and typing. After the set-up, the mouse is used exclusively for controlling your bowler. You can control the speed of the ball, the amount of hook, the "take-off" point of your bowler, and the drop zone of the ball. The latter two are accomplished in advance of throwing the bowling ball. Speed and hook are controlled during your wind-up. The documentation is very clear on the mechanics of throwing the ball, and within minutes of playing, you will find yourself very familiar with the controls. The documentation also covers some throwing strategies, the method of scoring (very important for bowling beginners) and some ways of achieving spares from tough splits.

Lets get on with the game. You are presented with a true perspective of the lanes from behind and above your bowler, who is ready to throw the ball. As mentioned above, you set up the direction that you wish to throw, then by hitting the left mouse button, he begins his approach to the lane. You control speed and hook with your mouse by watching the appropriate indicators. Once the ball is released, you actually hear the ball roll down the lane (digitized) and presuming you don't send a gutter-ball, it will crash into the pins sending them into spins and loops. If you've made a strike, you'll receive the applause and cheering that you deserve. If some pins are left standing, the pin machine will clear the lane and reset the unfallen pins for your second ball. If you make the spare, you'll receive a courteous applause. At the end of your 10th frame you will also receive a warm round of applause in appreciation of your bowling talent!

Did I mention that all the sounds you hear are digitized! That's right. You feel like you're at the bowling alley with all attention focused on you. The "yeah"s and applause make you feel like a million bucks when you make a strike. This is the feature that separates this game from all the rest, and makes *10th Frame* a tremendous amount of fun.

The scoreboard is updated automatically after each shot and, just as at the bowling alley, the lane sign shows the pins left standing while the machine resets the pins. Even the sound effects for the pin machine are digitized!

Between frames, the scores of all the players are shown in tabular form so that you can see how far behind, or ahead, you are. Incidentally, bowling is a game which proves the cliche, that, "it's never over, 'til it's over". Early leads can easily wither away. My top score, in this game is a dismal 202 at the pro level, so don't expect to be bowling perfect games for quite some time. It will take a great deal of practice to get your timing right.

The game plays very quickly, with the pace set by your proficiency at setting up each shot. Because the games play so quickly (about 7 minutes per player), the lack of a game save feature is not noticed too much. However, there is no high score save feature either! It certainly would be nice to have a "Hall of Fame" of

bowling scores, or, for league play, a save of all games played for statistical and handicapping purposes. However, this is a small point in relation to the expert programming of the game mechanics by Roger and Bruce Carver and adapted for the ST by Brent Erickson.

There are several other features that make this simulation so much fun. The hooking of the ball, as it travels down the lane, is so detailed that you can watch the finger holes spinning. The pin action is really something else to watch, too, as they spin around and bounce off of each other. There is a fine line between a strike and a difficult 7-10 or 6-7-10 split, so you may find yourself, as I do, arching and contorting yourself with body "english", after releasing the ball, feeling as if it will help rescue a terrible split. However, even when confronted with a split, there is hope that on your next shot you will spare it up. I've been able to make spares on 6-7-10 and 4-5-7 splits, but, so far, not on the "grand-daddy" of splits, the 7-10.

Still more features include: the ability to print out score sheets after completion of the game; ability to quit a game during play (hopefully only necessary on "bad" days); ability to "short-circuit" the opening title page and music (by hitting the space bar); and, ability to start another game with the same players using a single keystroke.

All in all, I believe the programming achievements of *10th Frame Pro Bowling Simulator* warrant it a solid 10 out of 10 for entertainment software. If it weren't for the inconvenience of the security key (ESPECIALLY, on the 1040ST), this program could be the entertainment program from which others could be measured. But, that darn key, when you can find it, usually after the program has crashed to remind you to put it in ... I just don't know. I guess consumers, as always, will be the judge of whether the key is the appropriate means of protecting software from unauthorized duplication.

A great entertainment package, none the less.

PD-OF-THE-MONTH

Wow! That's my reaction to David Addison's public domain software program *Monopoly*. This game, for the color ST, is a compiled *GFA BASIC* program converted from *True BASIC* on the *Amiga*. And what a program! Full color playing board, cute animation, sound effects and up to three computer opponents make this program a must have for every ST owner's library. Once again, "Power without the Price" is demonstrated in the way of public domain software.

In this version of the Parker Brother's classic, you play the "long" version, that is, accumulating properties as you land on them, and trading as you proceed around the board. All of the regular options are available to you: getting information on each of the properties; mortgaging, buying houses and hotels; community chest, chance cards; trading with any of the players (a warning: the computer players are not pigeons - they expect top dollar for their properties); and, so on.

All of the possibilities (except choosing the number of computer opponents) are accomplished with the mouse. And all very, very fast. I think you'll find this program will rejuvenate your interest in the classic game. One point, however, you'll need to know how to play *Monopoly* already, as there is no complete documentation file for it. The computer won't let you cheat, so maybe you can learn on the fly.

This is an excellent program, worthy of your attention. The source code is also available so that you can make modifications to your liking (providing you own *GFA BASIC* and compiler). It is available in the *Current Notes* public domain library (#122) and is also available on the WAACE BBS.

Until next month, take the time to enjoy a relaxing diversion on your ST. Who knows, you may live longer and be happier, too!

ADVENTURES IN THE MAGIC SACDOM
New Acquisitions and Printer Drivers

by Jeff Greenblatt

THE ST-MAGIC LIBRARY GROWS

This month, two new disks were added to the Current Notes ST-Magic Library. They are disk M1B which contains *Finder 1.1* and disk M12 which contains version 4.01 of *MacBillboard*. Disk M1 will be renamed M1A containing *Finder 4.1* and a few other files.

FINDER 1.1

Finder 1.1 has been added to the library for those of you with 1/2-meg ST's who must configure your machines as 128k or 256k Macs. Finder 1.1, although originally meant for the smaller size Macs, appears to be just as reliable as Finder 4.1 when used on a 1-meg ST configured as a 512k or larger Mac. Using Finder 1.1 won't solve the problems of not being able to use Switcher or large applications on the 128k and 256k configurations. Those of you who have a 1/2-meg ST and a Magic Sac should be using this finder.

MACBILLBOARD

MacBillboard is basically an enhanced version of *MacPaint*. *MacBillboard* requires at least 512k of memory (a 1-meg ST) and should not be used with motivator, ramdisks or switcher.

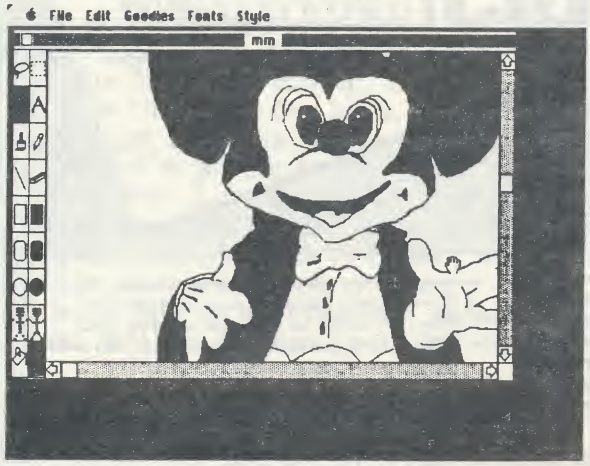

Figure 1: Full Screen Editing in MacBillboard

MacBillboard is compatible with *MacPaint* and Click-Art type document files. The program has many advantages over *MacPaint*. As its name implies, very large graphic printouts can literally be created. In addition to the standard full page (1x) printout, it gives you the ability to make printouts in 2x, 4x, 8x, 16x and 32x ratios. It also allows you to crop your art work thus eliminating paper waste. The largest size (32x) produces a printed document that is 21'-4" by 26'-8" when all the sheets are joined together. Bear in mind that 2x doubles the size of your printout, so it uses 4 sheets of paper. Let's see now, 32x uses how many ..... forget it, I couldn't afford the cost of the ribbons and paper it would consume, nor the hours it would take to print it out. The smaller enlargement ratios are useful though. In order to print very large drawings (usually 16x or 32x), a two drive system is recommended. The second drive is needed to store the document on a temporary basis for printout.

MacBillboard does have other useful features not found in *MacPaint*. Unlike *MacPaint*, it gives you the ability to use split screen window editing. When this feature is selected, the entire page is seen in a window on the left side of the screen, while the right side contains a scrolling editing window. Full features of the graphics editor are available in this mode. Another interesting feature is modifiable paintbrushes with a spray paint effect. Other features available in *MacBillboard* are creating and printing greeting cards (similar to *Printmaster* or *Print Shop*), and printing iron-on decals if you have a heat transfer printer ribbon. The graphics editor also has a 3-step zoom feature which replaces "fatbits" found in *MacPaint*.

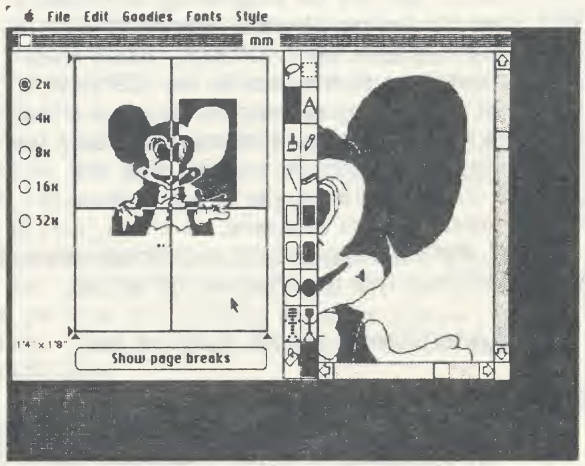

Figure 2: Split Screen Editing

MacBillboard is the creation of CE Software of Des Moines, IA and is distributed on what they call the MacHonor system. If you like the program and intend to use it, they request that you send them $35 as a registration fee. For this fee they will send you a new disk which contains the latest version of *MacBillboard* (currently 4.01), graphic document examples, a 52-page manual, and another graphics program *MacBanner*. *MacBanner* produces banners which can contain both graphics and text. If you have different color ribbons, *MacBanner* has the ability to produce a multicolored printout. Of course you will have to port the contents of the new disk they send you over to the ST since the

disk is in Macintosh format.

In my opinion, this software is one of the greatest bargains around. Where else can you get an enhanced version of *MacPaint* with most of the features of *Printmaster* or *Print Shop*, more flexibility, with almost unlimited fonts available for installation, in one package at such a low asking price.

PRINTER DRIVER UPDATE

According to Dave Small, version 4.0 of MAGIC.PRG will not contain a printer driver as we all hoped it would. However, there are commercial products available that will drive approximately 90% of the printers on the market. SOFTSTYLE of Honolulu, Hawaii (800/367-5600) produces printer drivers (and plotter drivers) for just about every printer available.

Most dot matrix printers available today are so-called "Epson" compatibles. SOFTSTYLE produces an Epson printer driver called *Epstart*. *Epstart* contains five driver files for MX, LX, JX, FX and LQ series Epson printers and compatibles. Your printer must be 100% Epson compatible for the drivers to function properly. Obviously, if you have an Epson brand printer, you won't have any problems with compatibility. So far, the following Epson compatible printers have been reported to either work or don't work with *Epstart*:

WORK	DON'T WORK
Star NX-10	Star Radix 10,15
Selkosha SP-1000A	Star Gemini 10X
Citizen MPS-10	Star SD-10
Panasonic 1091	
Canon PW-1156A	
Okidata 192*	

* Works in graphics mode, but not in text mode.

If you know of any other Epson compatible printers that do or don't work with *Epstart*, give me a call or drop me a card in the mail. In order to use one of the *Epstart* drivers, copy them into the System Folder. Then, using Chooser(DA), install the driver you want to use with your printer. Don't change the Appletalk or Port configurations. Appletalk should be disabled and the Printer Port icon should be enabled. Also remember, when using MAGIC.PRG to get the MAGIC SAC going, to change the printer port to "parallel" or your printer won't work at all. The easiest way to find out whether the driver works with your printer is to try a screen dump. Press [CapsLock]-[Control]-[Shift]-4 simultaneously. If all is well, the printer will start to print the screen contents immediately. If the printer starts ejecting paper or printing garbage, give me a call, I might be able to help.

Typically, before printing is invoked through an application, *Epstart* gives you a chance to choose the type of printout quality you may want. The choices are HIGH, STANDARD and TEXT. TEXT quality does not print out Macintosh fonts or graphics. It uses the default type-style of your printer and it's good for a quick printout of text files. STANDARD quality will produce Macintosh fonts and graphics, single struck. It's good for proof copies of *MacWrite* or *MacPaint* documents, saves on printer ribbons, and it's quicker than HIGH quality. High quality is the same as STANDARD except the images are double struck and the printing take more time.

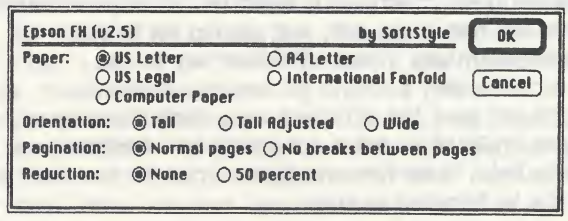

Figure 3: Epstart Page Layout Menu

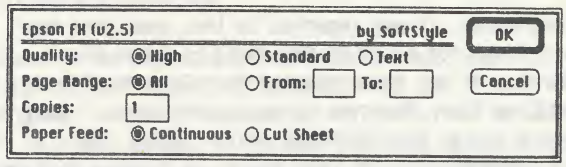

Figure 4: Epstart Print Menu

Epstart is available from many mail order merchants found in Macintosh type magazines such as MacUser. You will have to port it over to the ST to use it. The price varies from $19 to $35, so look carefully at the ads. Softstyle also produces drivers for other types of printers including 24-pin machines. Chances are if your printer is not Epson compatible, a driver is available for it.

Another source for printer drivers is GDT Softworks, Inc. of Burnaby, B.C., Canada (800-663-MACC). They have numerous printer drivers for Epson, Okidata, and HP printers just to name a few in their *Print-Link* Software. They also have print drivers for most of the common Daisywheel printers around. The list price of each of their drivers is $62 plus shipping. Their products are installed the same way as *Epstart*, using Chooser. If you don't have Chooser, it's available on Disk #M11 in the Current Notes ST-Magic Library.

One word of caution! Applications such as *MacWrite*, *MacPaint* and *MacBillboard* look for the printer driver setup in the system file, however, most DA mini text processors don't. They automatically assume you have an Imagewriter and send the text to the printer port. So DA's such as MiniWriter and Mockwrite won't work unless you have an Imagewriter or compatible printer. I have included MiniWriter on all of the Current Notes ST-Magic library disks so that those who purchase the disks can at least read the documentation for the software on the disks.

There is hope for those of you who have Star Gemini and Radix printers. Both Softstyle and GDT Softworks are working on print drivers for these machines. Use the 800 numbers listed above to "bug" them to produce these drivers. In the mean time, there is a product on the market by the name of *ProPrint*, which, although not a printer driver as such, will produce text on just about any printer including Daisywheel, Gemini and Radix machines. *ProPrint* is produced by Creighton Development of Irvine, CA. Graphics is not supported by *ProPrint*; it was designed to work with *MacWrite* 2.2 only. It will print plain text files out, but pagenation is not supported with text files. The best way to use *ProPrint* with text files is to load the file into *MacWrite* and save the file back as a *MacWrite* document. Then use *ProPrint* to print out the file. *ProPrint* supports Bold, Underline and Italic print if the text in *MacWrite* is formated as such.

RUMORS

Last month, it was reported in this spot that the final 4.0 version of MAGIC.PRG would be available mid-March. It was also reported that Data Pacific would be debuting their Mac-type drive in late March. Well, I'm sorry to say that both are still rumors. In a recent conversation with Dave Small, he told me that the drive still isn't ready and neither is 4.0; maybe sometime in April. Version 4.0 may support double-sided and hard disk drives.

TIPS

If you need to trash a file that is locked, there is no need to unlock it before trashing it. Simply press the ALTERNATE key when dragging the locked file to the trashcan. The file will automatically be unlocked without using the GET INFO from the FILE drop-down menu.

HELP

Those who need help with anything related to the Magic Sac or just want to have a discussion about its use, drop me a card at 804 N. Argonne Ave., Sterling, VA 22170 or give me a call at 703/450-6462 (between 7:00 pm-10:00 pm EST weekdays or any reasonable time on the weekends).

SOFTWARE THAT WORKS

I have been receiving several phone calls asking whether I have a list of commercial software that works with the Magic Sac. I don't have a very large list because I don't have access to most Macintosh software to test them. Here's where I need your help. If you will send me a card listing the commercial software you know that works (and one's that crash), I will compile the list and include it in a future acticle in this column. It would be helpful if, when you send your list in, you list which version of the Finder and MAGIC.PRG the software worked with or didn't work with.

ATARI ST MACHINE LANGUAGE
Published by ABACUS Software

Review by George L. Smyth

I have had much fun playing around with the languages avaliable to the Atari ST, particularly PASCAL and FORTH. Because FORTH allows the programmer to write the most time consuming portions of the program in assembler and embed this code within the FORTH source code, I decided that I would learn a bit about the 68000 microprocessor and begin to play with assembler coding. In looking over the selection at the local bookstore and having used the Abacus GEM Programmer's Reference and ST Internals, I picked up Abacus's Machine Language book sight unseen with the thought in mind that this book would perhaps point out things specific to the Atari that other books concerned solely with the 68000 might miss.

DESCRIPTION

The ST Machine Language book is the fourth book in the Abacus series for the Atasrl ST. It is 274 pages long with the text double spaced (29 lines to the page), and large print (average 65 characters per line). The book is divided into eight chapters, Microcomputer Fundamentals, Hardware Fundamentals, The 68000 Microprocessor, Program and Memory Structures, Operating System and Programs, Fundamentals of Assembly Language Programming, Programming Step By Step, and Solutions to Typical Problems. The appendix includes flowchart symbols, condition codes, 68000 addressing modes, and an instruction overview. The book retails for $20 and has no index.

EVALUATION

The first chapter of the book, Microcomputer Fundamentals, explains how data is represented in the computer, what a byte is, what a logical operation is, and shows an ASCII chart. Because I was already familiar with this information I quickly read on to the next chapter.

Chapter 2, Hardware Fundamentals, was only 11 pages long. An explanation of RAM, ROM, and the CPU are contained here. As I read this I began to get a bit itchy. If a person doesn't know the information presented in these two chapters, he shouldn't be considering a jump into assembler at this point. With trepidation I continued to the next chapter.

Chapter 3, The 68000 Microprocessor, I expected to be the meat of the book, but it turned out to be only 22 pages in length. I wondered how they would be able to pack all the information needed into so few pages until I read in the chapter's introduction which included: "An exact description of all of the 68000's instructions is beyond the scope of this book; only the most useful of the instructions are explained." I shelled out $20 for a book on 68000 machine language which considers most of the instructions to be beyond its scope? I continued reading the explanation of the register structure and data organization. A table showed the contents of the status register which was followed by an explanation of each bit ... except for the Negative Flag. For some reason an explanation of this bit was left out. Or was it? The explanation of the Zero Flag is as follows: "The zero flag is set if, after an operation, the highest bit of the result is set, indicating that the number is negative in two's complement." By the way, that was the full explanation. The explanation of the 15 addressing modes is contained within 6 pages in 100 yard dash style: very short three and four sentence descriptions of each mode with no accompanying examples. By the time I finished this chapter I really didn't feel like continuing with the book.

Chapter 4, Program and Memory Structures, explains what a flowchart is, what a procedure is, and finally stack operation. The explanation of the latter is all right, but then again, if you don't already understand a flowchart and what a procedure is, you probably shouldn't be working with assembler just yet.

Chapter 5, Operating System and Programs, is seven pages long and informs me of such things as "(a microprocessor) does not understand high-level programming languages" and the function of an assembler and editor.

Chapter 6, Fundamentals of Assembly Language Programming, is the longest chapter in the book and explains fairly well how to use the assembler which came with the Atari 520 ST Development System. If I had bought the $300 package, would I have bought this book?

Chapters 7 and 8 explain how to write a program to convert a decimal number to binary and then very quickly runs through several other assembler examples. I didn't read these last two chapters because by this time I had purchased 68000 Assembly Language Programming by Leventhal, Hawkins, Kane, and Cramer (this book, in sharp contrast, is nearly 500 pages long, utilizing small print (47 lines by about 80 characters per line) and is very complete (by the way, it cost $20 also)).

RECOMMENDATION

All things have their purpose, and this book is no exception. I would heartily recommend this book to the individual who either feels a need to asthetically complete his collection of Abacus books, or has a need to claim having read a book on 68000 assembler very quickly. To anyone else I would suggest avoiding this book like the plague.

SYLVIA PORTER'S SWIFTAX

Your Personal Tax Preparation and Planning Program

Review by Andrzej Wrotniak

Having mailed my 1985 tax returns a couple of hours before deadline, I promised myself: "Next year I'm going to do it in January, and maybe with a computer program?".

The next year is here, and thanks to Mr.Tramiel (born and raised in my home city, another reason to get an Atari ST) I've got at my fingertips more number-crunching power than most mainframe users had 10 years ago, so where are all these wonderful tax programs, supposed to make a pleasure out of your dealings with Uncle Sam?

Finally, at the end of February, my friendly neighbourhood computer dealer (no names, no free advertising, John!) said: "Yes, we got *Swiftax*, from Timeworks, the same folks who came out with *Word Writer*, come and get it!".

The program sells for $50-$60, which is quite a lot for something you are going to use just once. For this money you can buy a decent compiler or word processor, so the price seems quite steep -- both in terms of what you (presumably) get and the amount of labor involved.

All right, 50 dollars is something I still can afford, especially with all I'm going to save doing my taxes the smart way this year, and *Word Writer* is a very nice word processor, so let's go and get this *Swiftax*, and let's do it right this year.

The program comes with a H*U*G*E plastic folder, Sylvia Porter's 1987 Income Tax Guide (a large paperback you can buy in your drugstore), and a 36-page instruction booklet. Six of these pages are blank, a few others contain information on how to format disks, and what printer port, cursor, desktop, GEM and some other things are (of course, an ST user would never know all this). The remainder, however, contains some useful information, and the program has on-line help. Once again, other programs by Timeworks have nice, friendly and well-designed user interfaces, so the assumption can be made that this is the case here, too.

So, back up the original, load and go, true? False! At first you have to configure your program and data disks: an installation program will copy some data files to one disk, remove some from the program disk, depending on whether you use one or two floppy drives, or a hard one. A quite cumbersome procedure, due -- I think -- to the fact that the program is itself a port from another, more primitive machine.

OK, the two disks are finally ready, let's roll. The program is structured around pages and/or sections of IRS forms, so one of the first things to do is to enter your name, address, SSN and such. Trivial, right? Wrong! Things are easy if you live at 7 Pit La., but if you are unlucky enough to have an address like 7509 Chapfield Whitel Rd.,#406 (as I do), there is NO WAY of squeezing it into the provided template, limited to something like 20 characters for reasons I cannot fully comprehend. (On a 1/2 Meg machine, with 80-column display and at least 360k of disk storage? Come on! Even our friends from IRS provide almost from 4 to 6 inches of space for this information, depending on form, and they are on a tight budget after Gramm-Rudman).

My working knowledge of American English being as limited as it is, I managed to swallow some curses, abbreviate the address to 7509 Chapf.Whit.102 (hoping it will not be understood as evading the tax authorities), answered a few following questions to reach the number of exemptions equal to one (this was a breeze, boy!), entered my salary from the W-2 form (do I really earn all this money? So why can't I see it?), and found myself on Page 2 of everybody's favorite 1040 form.

Having incurred some professional expenses last year, and hoping to deduct 10 dollars which went to charity, I decided to itemize. Ms. Sylvia Porter warns that this increases your chances for an audit, but what the hell, we've got nothing to hide, our receipts are in order, and we also want to deduct the 50 dollars paid for this program.

Every time we go from page to page, both disk drives do something, something is being written to the data disk, something (overlays?) is being read from the program disk, I can only imagine that single drive users may already have blisters on their fingers from disk swapping. My impression that the program is a cheap port from another machine is getting stronger: what do we need to read from the program disk, can't a 1/2 Meg machine hold the whole program and all data in the memory? Even with all the system overhead? Hard to believe!

Anyway, we are now in Schedule A. No medical expenses above 5% of our income, thank you, so let us enter our credit card interest, state taxes, first those withheld and then... What is going on? A small window pops out, warning that I will pay more when itemizing and asking whether I am required to. Luckily, the window has a closer box, which must serve some purpose, let's get rid of it, oops!

Here we are back on Page 2 of our favorite Form 1040 with itemized deductions set back to zero. Back to itemizing, do not click on the closer box any more. No

medical, thank you, state taxes... Let us answer "yes" to the question in the little window (i am not required to itemize, but I want to -- my business), the window flashes a question about my income and mercifully disappeares before I can answer), state sales taxes... What? This little window again? Okay, calm down, it is just a minor glitch, let us answer "yes" politely, and get to our 10 bucks of charitable contributions. But -- why is no field highlighted on the screen? What happened to the mouse? It is still there, moving, but nothing else. I can click on anything I want, but with no effect whatsoever. The function keys are dead, too, as is the rest of the keyboard.

No, no need to use our newly extended American English vocabulary. True, no program should crash if the user inputs something in unproper order, or if his/her charitable contributions are ridiculously low, but let us try again and work our way around this bug. Somebody at the Timeworks had to try the program out, they wouldn't release something obviously useless.

Cold restart, just in case. The instruction manual tells you exactly how to doubleclick on the program icon (I would never figure it out by myself!) to run it, and we are back in business. All the data files are as stored on disk before the crash, so I do not need to input everything from scratch. Page 2 of 1040, F3 to enter Schedule A, now careful, let us first go down using the scroll bars and go up in reverse order -- the manual never says it is illegal, nor does IRS.

My 10 charitable dollars are already there, let's go up to the state tax, this should give us a nice break... WHAT ?????? No, not again! Yes. Exactly as the last time. The program is dead, more exactly catatonic, still alive (mouse cursor moves around), but not responding to any other stimuli.

Slow down, no real need to recall all these Greek words learned from my fellow reviewer from these pages, or these juicy Russian ones acquired from a colleague at work. Maybe the previous crash corrupted the disk files? So, back to the original disk, make a backup, run the installation program. Enter name, address (my feelings about this too short a field are much worse now), and into the 1040.

Let me save you the details; the program crashed again.

All these times I worked in the "Auto" mode, with the program recalculating all relevant fields after each entry. So, maybe the bug will not occur in the "Manual" mode, when the recalculation is performed only after you press the F9 key?

Here we are back in the program, switching to manual; you may fill in the forms and schedules in any order, says the manual, so just let us fill Page 1 of the 1040, and jump into the dreaded Schedule A. The little warning box does not pop out (does it mean that I loose on taxes only when I compute them in the "Auto" mode? Strange...), all deductions succesfully filled in without crashing, so let us leave Schedule A and get to Page 2. What? Missing data file? I am not responsible for creating and keeping track of data files; this is exactly what I bought this program for. Exit from the program, open a beer, calm down. You can always call the Consumer Support Team in Illinois (and the call may be even tax-deductible), but you bought this program just yesterday and you'll mail your registration card only on Monday. No way.

Maybe the reason of the latest problem was, that the first run of the program was in the Auto mode and the second in Manual, while both modes require different data structures on disk? The instruction do not warn against such a case, but let us check it out. Back to the original, backing up, installation; let us start from scratch on virgin data disk. Manual mode this time, all entries OK, no problems this time -- finally, done.

Yes, the program works. Sometimes. But are the results all right? Probably. After all, mine was a simple case. On the other hand, my experiences with the package did not give me any confidence in its performance. Back to pencil and calculator, just in case: maybe what I've seen was all the trouble there was, maybe just a tip of an iceberg?

The bottom line? The best I can say about this program is, that it's tax-deductible and comes with a nice book (which you can buy for 7 dollars, anyway). Even if it worked properly (which it does with forms 1040EZ and 1040A), its work is mostly limited to arithmetic, which anybody having completed 7th grade can do as good or better.

If. But the program does not work. Under no circumstances should any user entry be able to crash a program of this kind, and this alone is enough to disqualify it. It is quite possible, that people who wrote it may say: "But you are not supposed to enter this before you've entered that, and especially not if you've put a zero in Line 32! You just haven't learned how to use it right!". Maybe. I can invest my time in working my way around bugs or foggy places in a compiler or database, which I am going to use again and again (and this is what I have been doing quite often in the last 20 years). I will not do it in the case of a single-use program. This program is supposed to save my valuable time, and if i have to sacrifice 5 hours to save 2 hours, it's just not worth it. And once again: the program has no right to crash even if i dance on the keyboard in a hula-hula skirt.

Don't buy it. Don't borrow it. Don't steal it. It's a lemon.

ECHO AND THE X-10 POWERHOUSE
Turn Your ST Into Your Own Private Butler

Review by Roger Abram

How would you like your Atari ST to have a fresh pot of coffee waiting for you when you get up in the morning? Or have it adjust your thermostat a few degrees lower in the evening after you've gone to sleep? Wouldn't it be nice if it could even cook dinner and get the kids ready for bed?

Thanks to Echo, by MichTron, Inc., the first two items are possible and are daily events in the Abram household. In addition, the front porch light comes on every morning at 6 AM, turns off an hour later, and then comes on again at 5 PM when it's getting dark. And it's all done automatically.

Though Echo lets you program all these events, the real workhorse in the system is the X-10 Powerhouse Computer Interface and the various X-10 modules that control each switch, lamp, or appliance. To be honest, after you have programmed the Powerhouse interface, it can be disconnected from your computer until you need to change your timed events.

How does it work? Events are sent from your ST to the interface and are stored for processing. The interface has its own internal clock and will send the appropriate on/off signal to the module/switch you have selected at the time and day of the week you have chosen. The signal travels through your existing electrical circuits.

How does it know which module to turn off or on? When you install an X-10 switch or lamp module, you select its House Code and Unit Code. For example, the front porch light could be module A-1. The back porch light could be A-2. Or they could both be the same if you always wanted them both on at the same time. All in all, the interface can control 256 electrical devices and change their status 128 times during a week! The different X-10 modules/switches cost from $10 to $25 dollars each, so you'll probably want to stay on the conservative side.

Echo is the tool by which you program the controller to perform all these functions. It is GEM based and extremely easy to use with only a glance at the manual necessary before your lights are being automatically controlled.

There are four main menu items at the top of the display...File, Control, Printer, and Diagnostics. The File menu has three options: load a file, save a file, or quit and return to the GEM desktop.

The heart of the program lies in the Control menu. It is here where you specify the time and days of the week a specific module will turn on or off. To assist in your planning, a Program Events screen pops up which needs to be completed for each event. You complete this screen once to turn on a light and then once again to turn off the light. To control a module, you enter the time for the event to happen, a description (i.e. Porch Light), click on the appropriate House Code (A-P), the appropriate Unit Code (1-16), the days of the week the event is to occur, the mode (Normal, Security, Today, or Tomorrow), and the status (On, Off, or levels of brightness from 1-16).

What happens if you forget the House Code and Unit Code of a module? From the Program Events screen you can bring up the House/Unit Descriptions screen which is a listing you will have previously entered that gives the code for each module in your system. It's a good idea to enter this information into the program as soon as you set up new modules. Though lamp modules are easy to check because they plug into receptacles, switches require that you remove the wall plate to change or inspect the codes.

As mentioned above, there are four different modes that can control an event. The Normal mode is for events that occur at the exact time and day specified, Security makes the lights come on within a hour of the selected time so potential burglars won't become suspicious of lights coming on at the exact same time every day you're on vacation, Today if the event is supposed to occur only later in the day you are programming the interface, and Tomorrow if the event is to happen only on the next day. These latter two modes are erased from the interface at midnight following their execution. Because the interface has a 9 volt battery backup, you can be certain that a power outage on the second day of your vacation won't wipe out your programmed events.

As you add each event, control passes from the Program Events screen to the Location Control screen where you'll see a complete list of the events you have programmed. If you have more than the 16 than can be displayed at one time, click on the slider bar to scroll through the additional entries. When you've finished entering your events, click on the Re-Sort box and Echo will sort your entries into the order that the interface will need to execute them. You then click on the Done icon, check that the ST has the correct time and date, and send your events to the Powerhouse interface. You can then print out a listing of your

(Continued on Page 47)

MACROMANAGER
Useful Tools?

Review by Roger Abram

MacroManager by Shanner International Corporation is a desktop accessory package geared towards the ST that is used in an office enviornment. Its major features are a calculator with 19 functions, an event alarm to alert you of upcoming appointments, a rolodex-type database to keep track of names and phone numbers, time accounting to allocate hours spent on various projects during the week, and a notepad to quickly jot down fresh ideas.

In trying out the event alarm for the first time, I took a calendar and entered everyone's birthdays and anniversaries. No more belated cards or gifts! I also entered one to prod me into starting this review. I scheduled it to go off on the first of the month and to signal me everyday until I deleted the entry. But I didn't use my computer on the 1st and when I did turn it on the next day, there was no alarm. After much experimentation, it became evident that the alarm will only go off every single day if you use your computer everyday! Since it hadn't alerted me on the 1st, it didn't reset itself to alert me on the 2nd. Unless you use your computer each day, you'll never be certain if you missed an alarm you configured months ago.

The electronic card file duplicates a rolodex and adds another dimension: it can even dial the phone number if the ST is equipped with a Hayes or Supra compatible modem. The cards can be printed out in three different formats: name, address, and phone number; name and phone number; or, just name and address.

The notepad application presents an instant remedy for those scrap pieces of paper that disappear on your desk after someone's called and you're supposed to call them back with whatever information they requested. But you can't find their number! You can leave all the information you need in the notepad editor and retrieve it later. Whereas the card file database is limited to name, address, and phone number, the notepad can contain 64 lines of 70 characters each. You can have as many notepads as your disk can hold.

The calculator is loaded with features including automatic loan computation, 10 digit display, 10 memories, and 19 functions. It can be configured in either algebraic notation or RPN mode. Input is via the mouse or the ST's keypad and you also have the option to send your calculations to the printer.

If your company requires you to determine how much time you spend on different projects in the office, *MacroManager* can take your daily totals and generate an end of the week report summarizing the total time spent on each project code. You are limited to 200 unique project codes on the report.

The information for the time analysis report is taken from data you enter onto another screen, the weekly planner. It is here where you can visually see your appointments and meetings at a glance under each day of the week. Each day can contain five lines of information and they can be in either straight text format or ones which can be read by the time analysis report or the event alarm. You can browse through your "electronic calendar" week by week to find when you last met with someone or when an upcoming report is due.

All of the above features occupy only one desk accessory. There are several desk accessory packages now on the market so you should determine if this one has a useful spot in your daily routine before purchasing it. If I had an ST on my desk at work, this would be a great program. Since I don't, its benefits to me are minimal. The problem with the event alarm is a big disappointment and since Shanner International has gone out of business, the future of any upgrades is uncertain. The program was developed by Blue Moon Software which has an address in Lenexa, Kansas, but no telephone listing.

ECHO (Continued from page 46)

data, save your data to disk, and run a quick diagnostic test on the interface. When you're done, unplug the interface from the serial port and plug your modem back in. The interface only needs to be connected to the ST when making changes to the events.

Echo and the Powerhouse interface both do their jobs well. The interface has recently been offered by DAK Industries at the affordable price of $20.00. Control modules are also available from DAK and from stores like Radio Shack and Sears. If you order the interface from DAK, be sure to get the one for the IBM PC because it comes with the serial port cable. You'll have to purchase Echo separately.

There are many accessories available for the X-10 system: a Telephone Responder enables you to call and turn on your modules from any location, a Mini Controller lets you control lights from a different location in your house, Burglar Alarm Interface, 2 and 3 Pronged Appliance Modules, Heavy Duty Appliance Module, Thermostat Controller, Wall Switch Modules (including 3-Way), Lamp Module, and even a Wall Receptacle Module. Now, about that module to cook dinner and get the kids ready for bed....

ST WRITER MAILMERGE
Let's Give It A Try

by H. B. Monroe

ST Writer is absolutely the best word processor available for the ATARI ST computers. Seven other processors have been studied but the *ST Writer* always ends up the one to beat. Among the many excellent and useful commands available is the mailmerge command.

Many people who need mailmerge for the 520ST have trouble making the mailmerge feature of *ST Writer* work. If this has happened to you, fret no more. Here is a simple, sure fire way to do the trick. You can't go wrong. Suppose you want three of your friends Tom, Dick, and Harry, to receive the following letter;

March 22, 1987

Dear ?,

The mailmerge feature of ST Writer allows you to mail a personalized letter to two or more people.

Cordially,

Joe

The question mark (mailmerge signal) in the salutation will appear in red and is placed by pressing [F9]. When the letter is printed, the mailmerge signal tells the computer to ask you if you intend to get your mailmerge input information from a file. The alternative is to type in each entry from the keyboard. Press "Y" and you will be asked for the name of the file to use. Enter the data file name and the printing will proceed. Do not ask for more than one copy. The mailmerge function will print as many letters as is needed for all the data lines in the mailmerge file.

Two or more mailmerge signals may be used in each letter, but a data line, in proper sequential order, must appear in your mailmerge data file for each mailmerge signal used, i.e. if you have a 3-line address plus greeting, the four [F9]'s must have a corresponding four lines in the data file. If one particular letter requires only three mailmerge signals because the address requires only two lines, in the data file there must be a third address line left blank (with only a return) to balance the file.

A mailmerge file is easy to prepare using *ST Writer*. The mailmerge file must be printed to disk using a special command line:

^T0 ^B0 ^L1 ^Y2

(Ed. Comment: The "^" is used to indicate the [Control] key. Thus ^T means [Control]+T. The above line calls for Top Margin 0, Bottom Margin 0, Left Margin 1, and Page Length (Y) 2 half-lines).

In each case the capitol letter of the command line is entered by pressing the control key while entering the letter. The Y command may be followed by either the number 2 or by a number equal to twice the number of lines in the letter. In our example letter, the number after the Y could be either 26 or 2. Each control command must be followed by a space.

ST Writer uses carriage returns to recognize a data line, so be certain that no extra carriage returns appear in your mailmerge file, i.e. the data file must be continuous for whatever mailmerge group of letters you are producing. If there are 3 or sixty-three, each must follow the other with returns but no spaces. Below is a sample of the *ST Writer* file used to construct a data file for my form letter. (Note: the "<" symbol represents a carriage return.)

```
^T0 ^B0 ^L1 ^Y2 <
Tom<
Dick<
Harry<
```

Now comes the important part where many people go astray. The mailmerge data file must be PRINTED TO DISK. To print a file to disk go to the menu, press P for PRINT, than press D for DISK. Enter a suitable name for the mailmerge data file. The screen will ask "print the whole document?" Answer yes, and the mailmerge data file is printed to the disk and ready for use. This process produces a simple ASCII text file rather than the standard *ST Writer* File.

Now with the "form" letter loaded into *ST Writer*, go to the menu and use a standard print procedure to print three letters, one of which will be addressed to each one of the three folks on your data mailmerge list. If you forget to set the page length to two half-lines (^Y2), your text file will contain blank lines sufficient to fill out whatever page length you do have set (66 lines or 132 half lines is the default setting). With a setting of 2 half-lines per page, the *ST Writer* output stops with the last data line printed. If you have extra blank lines, letters without mailmerge names will continue to be produced until you run out of blank lines.

The following is an example of a form letter written with *ST Writer* and an accompanying data file with four merge signals. Note comments are in italics, these would not actually appear in your form letter.

```
^C^CMarch 23, 1987
<
<
[F9]<          <- name (line 1 of data file)
[F9]<          <- street (line 2)
[F9]<          <- city,state,zip (line 3)
<
Dear [F9],<    <- name again (line 4)
<
     When using our new mailmerge function
please be sure to have the same number of
data lines in your data file as you have
merge signals in your letter.
<
^C^C Good luck with it,
<
```

The data file for this series of letter would look like this:

```
^TO ^BO ^L1 ^Y2 <     <- Top line sets parameters
Mr. Tom Thumb <           <- Letter 1, line 1
69 Hopewell Drive <       <- Letter 1, line 2
Anta Clara, NC 28170 <    <- Letter 1, line 3
Tom <                     <- Letter 1, line 4
Mr. Dick Finger <         <- Letter 2, line 1
11 Drywell Terrace <      <-     "   , line 2
Mother Mt, TN 32000<      <-     "   , line 3
Dick <                    <-     "   , line 4
Mr. Harry Horner <        <- Letter 3, line 1
2 Topscore Lane <         <-     "   , line 2
Wet Springs, FL 28028 <   <-     "   , line 3
Harry <                   <-     "   , line 4
```

Happy merging. By the way, the latest version of *ST Writer* (Version 1.71) is available in the Current Notes ST Library (CN #15). Order from: Current Notes Library, 122 N. Johnson Road, Sterling, VA 22170. Price is $5 delivered.

DONALD DUCK'S PLAYGROUND
All It's Quacked Up To Be

Review by Bill and Christine Moes

He was born in 1934, in the middle of the Great Depression. Toughness, that's what it took to make it through a time like that. Let 'em know you're there. And he did, rising to stardom and becoming one of the best known and most popular screen figures of all time. Frustrated, ornery, loud-mouthed, and irascible, he had one other quality: he was lovable. All of that was -- and is -- Donald Duck.

Donald Duck's Playground, a software program for the Atari ST, presents Disney's cartoon character in a somewhat varied light. Hardworking, Donald must earn money and then purchase playground equipment for his three nephews. The change-making process, the primary educational goal of the program, is skillfully presented at the stores as you make your own change for the purchases.

This is a program that the targeted age group (7-11 years old) should find to be a challenging and enjoyable experience. It's one my 11-year-old, who (she claims) already knows how to make change, greatly enjoyed. Maybe it's time for this review's narrator to *change* (if not cash in). Your turn, Chris.

When you start, you choose the level by walking through a door labeled beginner, intermediate, or advanced. You have to work in the toy store, the train depot, the airport, or the produce stand to earn money.

In the toy store, you have to move the ladder and try to get the toys in the right place on the shelves. In the train depot you move levers so your train gets to the town to pick up things and then have the train go somewhere to empty. In the airport, you pick up packages from a conveyor belt and turn around and put them in the right cart. There are three boxes in the produce market and you try to catch the fruit thrown so you can take it to the box where it belongs. In the intermediate and advanced levels, you move more quickly. You don't have to wait for Donald to get himself going. It's also harder because everything moves faster and zooms by.

Each work place stresses different skills in a semi-arcade situation. For example, the train depot takes strategic planning in moving track switches while the produce market is more action oriented. Each player will probably soon select one of the four to be his favorite. While working in one- to nine-minute shifts, the player will be earning money to be used in purchasing the playground equipment. After the shift is over, it's time to collect the payroll.

You get amounts of money depending on how much you earn. If you have five ones, it will change into a five-dollar bill. The same with changing pennies into a nickel. Then you go buy the equipment at Minnie's, Mickey's, or Goofy's store. The stuff costs more each level you go up. But you do earn more in the places where you work. In the beginner and intermediate levels, you can only buy one thing at a time. But when you get into the advanced level, you can buy three things. There are six items in each store. Whatever you buy will be taken to a playground.

One point players will learn, although they may not be aware of it, is the real-world aspects developed in the program. If you want more money, you have to work harder. It's advantageous to work at something for which you have some talent. And if you want to make it to some recreation, your own effort will dictate the amount of fun available. (At least these are real-world aspects for us idealists.)

The player may use the keys, mouse, or a joystick. The joystick seems the best choice. It, unfortunately, uses the mouse hole. (Mickey has asked that we not make any Mouse jokes.)

In low res, the graphics are colorful and bold, although there's no great detail or subtlety. The software also runs in hi res monochrome. The background music, which can be keyed off, is pleasant. Because the program was designed to be ported to many machines, you won't always see thorough use of the ST's power. The documentation, a 20-page booklet, includes clear directions and several non-computer learning activities.

I learned that working isn't as easy as you think it is. Some of those things are pretty tough. You have to make your own change and figure out how much change you need. I enjoyed the playground. My favorite one is the rocket slide, even though it took up two screens and you had to wait for it to load the other screen. But I thought it was kind of cute. They make it almost like you can feel it. On the playground, there are four main areas and the top part of the rocket ship. It's always the same nephew at the playground, the one with the blue cap. You can move some of the toys around, but you can't take them to a different screen.

I enjoyed it. I think it's fun. I like some parts of working, like trying to run the train. I also liked getting my payroll (heh heh).

(Continued on Page 51)

THE ST ART GALLERY

by David Mumper

This month, there are three new 'Best of Tiny' disks being added to the library. The first (CN #118) is the Sci-Fi disk. This contains some of the best Dr. Who, and Star Trek pictures, as well as many other space-related drawings. The second (CN #119) is Vehicles. This one contains the best of all motive means, going from BICYCLE (an Amiga convert) to POR911, and FERRARI for you fast-car patrons, to MODEL for you airplane folks and TRAVEL2C for futuristic travelers. The third disk (CN #120) is Cartoons #1 with many pictures based on Disney or Warner Bros. cartoons. Daffy Duck, Bugs Bunny, and friends join Mickey Mouse and Donald Duck. Some of the best on this disk include scenes from 'Sorcerers Apprentice' and 'Fantasia' as well as the infamous 'Ducky Dodger'. These are all color pictures.

For those of you that are interested in working with the ST's graphics, I'm going to attempt to pass on the things that I've learned while programming Tiny. Until I start getting a flood of responses from you telling me where to go with this column, I'll start from the bottom and try to work up to actual code segments to help in your programming efforts.

Because I have no idea of the level of experience any of you have in graphics programming, I'll start with the basics. The ST currently handles three different graphics modes. Low resolution, which has 320 pixels wide, by 200 pixels high with up to 16 colors out of the color palette of 512 available at any one time; Medium resolution, which has 640 pixels by 200 pixels, displaying up to 4 of the colors; and Monochrome resolution, which has 640 pixels by 400 pixels, displayed as either black or white. The Monochrome mode is only displayable on the special Atari monochrome monitor, because it requires a special 'refresh' rate. To achieve this high resolution, the picture is drawn on your monitor screen 70 times per second (as compared to 60 times per second for the color modes.)

Because of the way the ST handles these graphics modes, each picture you draw uses 32,000 bytes of the computers' memory to represent the actual picture.

The simplest way to understand why, is to start by looking at the organization of a monochrome picture. Each pixel is represented by 1 binary digit (bit) in the computers' memory. Hence, when you multiply the screen width by the screen height, (640 x 400) you get the total number of bits required (256,000, which is 32,000 bytes since bytes are made up of 8 bits.) It gets a little more complicated when you move on to either Medium or Low resolution. Each pixel in Medium resolution is represented by 2 bits. This is because to represent the 4 colors, you have to use a number somewhere from 0 to 3. These numbers are represented as 00, 01, 10, and 11 in binary. Again, when you take the number of pixels wide, multiply it by the number of pixels high, then by the number of bits required per pixel, you get 256,000 (640 x 200 x 2 = 256,000.) The last mode the ST has is Low resolution, which has 16 colors. Again, to represent the different colors on the screen, the computer uses the numbers from 0 to 15. In binary, these values require 4 bits (0000, 0001, 0010, 0011, ..., 1111.)

The colors that are used in the color modes (and even, to a minimal extent, in monochrome) are determined by a series of 16 values. The ST has the ability to display any of 512 colors. These colors are determined by modifying the amount of the three primary colors the monitors displays. The primary colors are Red, Green, and Blue (hence the name RGB monitor.) With the ST, each of the primary colors is represented by three bits, and these set of three values are combined into one 16 bit value (there are many unused bits in the combined value.) In Binary, the bits are used as follows: uuuuuRRRuGGGuBBB, where 'u' is unused, 'R' is Red level, 'G' is Green level, and 'B' is Blue level. In three bits, the computer can store a value between 0 and 7, thus producing three numbers with 8 levels, or 8 x 8 x 8 = 512 total values. Now, when the ST is displaying a picture, it takes the value of each pixel and uses it to find out which of the 16 colors is should place at that specific point on the screen. 16 colors you say? Yes, remember how the colors are stored in the computers memory. In Low resolution, each pixel can have a value from 0 to 15, Medium resolution, 0 to 3 and Monochrome, 0 to 1. Thus, each resolution limits how far you can go into the color palette, so, even though you can set all 16 colors, those beyond the number displayable are ignored. In monochrome, the value for the colors only determines whether the color is black or white.

Still to come: How the memory is organized!

DONALD (Continued from Page 50)

And now the philosophy: there's no "save game" and there's no "congratulations, you've won!" in the real world. And none here, although my daughter wanted to see it appear. That ain't life, kid. Life's not a beach, although there is some time for sand castles.

The $24.95 program from Sierra follows their earlier release, *Winnie the Pooh* (*Current Notes* Jul/Aug 1986), in presenting well-known Disney characters in a quality program for children. The effort is professional and the goal is worthy.

Next time Huey, Dewey, and Louie scamper across the silver screen, listen for Uncle Donald's screech: "Where do you think you're going?" Maybe you'll have the answer: *Donald Duck's Playground*.

MORE BASIC TOOLS

GFA Basic, GFA Compiler, LDW Basic Compiler(V 1.1)

Review by Stephan D. Eitelman

GFA BASIC

At long last there is an alternative to ST Basic. This alternative is called *GFA Basic* and is marketed by MichTron for $79.95 retail. The software and manual were written by a West German firm.

GFA Basic is, in my opinion, a vast improvement over *ST Basic*. The editor is extremely easy to use; there is a huge vocabulary of 252 commands; there is no excessive use of windows; the implementation is structured; and the resulting code is much faster than *ST Basic*.

GFA Basic is not copy protected and works well from a hard disk. It is a very compact program, occupying only 55K of RAM.

FEATURES

GFA Basic is extremely intuitive -- after double clicking on GFABASIC.PRG, it comes up in the editor. A command bar appears at the top of the screen that has 20 commands on it. They can be clicked-on with the mouse or activated directly from the keyboard using the function and shift keys. There are a number of other edit commands that are accessed from the keyboard; they are all summarized in about 1-1/4 pages in the manual.

GFA Basic does not produce ASCII code from the normal SAVE command; however, there is a command (SAVE, A) which DOES produce a text file that can be compiled with other compilers, manipulated with word processors, etc.

This version of Basic is advertised as allowing "structured programming". This means there are no line numbers, only one command per line, liberal indenting (FOR-NEXT loops, for example) and the use of procedures (Read: sub-routines). The resulting code is much more easily read and debugged than unstructured versions of Basic. A word of caution is in order, however. "Spaghetti" code can still be easily written with *GFA Basic*. When I was revising the random string program for use in testing *GFA Basic*, I had to use labels to mark the points where GOTO's were to branch. Since I no longer had any idea of what each of the GOTO's did, I made up arbitrary labels. The result was still a program that was difficult to understand and remained a fine (?) example of "spaghetti" code. Structured programming is as much a state of mind as it is mechanics -- structure must be written into a program from the very beginning.

Several accessory programs are provided. One is a run-only program that can be freely distributed with *GFA Basic* programs so that others may run the programs without purchasing *GFA Basic*. Two other programs, STKILLIN.BAS and BASCONVT.BAS are provided to aid in converting *ST Basic* files (or other ASCII Basic files) into GFA format. STKILLIN.BAS removes line numbers and splits up multiple command lines into one command per line. It produces a file with a .LST extension that is still an ASCII file. The MERGE command, it turns out, can be used to load ASCII files into *GFA Basic* with the proper format to be accepted by *GFA Basic*. This feature is not clearly explained in the manual.

The other conversion program, BASCONVT.BAS, is a mess. The item selector box always defaults to drive A; there is no way to select another drive. Clicking on the OK button does not select the desired file; it returns you to the item selector file. Clicking on CANCEL, however, does the actual selection, only the selection must be made from the drive containing BASCONVT.BAS which, if not in drive A, cannot be seen. Having hacked one's way through the file selector problem, the program announces that it is only partially complete. Wonderful. The program is supposed to make a full conversion of an *ST Basic* file -- remove line numbers, put only one command on each line, invent labels for GOTO references and the like. It works reasonably well, but adds some errors of its own. The one I ran into was the addition of a repeated index variable after NEXT so that Next I% comes out as Next I% I%. The converter does flag it as a syntax error. To add insult to injury, BASCONVT is not documented at all. My advice: To convert *ST Basic* files to *GFA Basic*, use STKILLIN, MERGE the file into *GFA Basic* and then edit the result manually. That marvelous editor makes it a pleasure.

Other features of *GFA Basic* include the ability to load and execute a non-Basic application from within a Basic program and another command to call a routine that was written and compiled in the C-language. There are commands for creating and modifying the GEM drop-down menus as well as support for calls to AES and VDI. Documentation for calls to AES and VDI is quite terse; there are only slightly more than two pages devoted to them.

DOCUMENTATION

The manual is a three ring, IBM-style binder with 281 numbered pages, three additional pages of index and a final page of license, warranty and other legal fine print. While the manual is an excellent attempt at thorough documentation, it contains a considerable number of editorial errors, misleading statements, and lack of detail in some areas (e.g., MERGE and BASCONVT).

Nevertheless, the manual is quite usable. The mistakes I found were obvious and easily corrected. There is already an errata file posted on GEnie, but it only goes through page 80 of the manual. In telephone discussions with MichTron (they are very responsive), I was told they are producing another, updated manual.

SPEED

An assortment of number crunching and random string manipulation tests were run. The results are shown in the chart at the end of the article. The essence of those numbers is that *GFA Basic* is F A S T !! It varies from three to nineteen times faster than *ST Basic*.

ACCURACY

GFA Basic provides 11 significant figures; they are all accurate, based on a less-than-comprehensive check of the sine and cosine at 45 degrees. I prefer 14 significant figures for math modelling and I would like to be able to select either single or double precision. But these are relatively minor complaints and acceding to these demands would probably cause *GFA Basic* to run slower.

GFA COMPILER

INTRODUCTION

MichTron is also marketing a companion to *GFA Basic* called the *GFA Compiler*. The *GFA Compiler* is used to compile *GFA Basic* programs into fast program files that can be executed directly from the desktop. This program is startling, to say the least. There are only two files on the disk, the compiler program and a resource file. There is no separate linker nor is there the usual long list of libraries and other supporting files. Speed of compilation/linking is breathtakingly fast (although I was using a hard disk).

FEATURES

Like their interpreter, GFA's compiler is delightfully intuitive to use. The compiler first presents the user with an OPTION window containing the various options, a COMPILE button and an ABORT button. Clicking on COMPILE causes an Item Selector box to be displayed to choose the file to be compiled. Then after a very short time (2.3 eyeblinks on my machine), another selector box appears to select the name of the compiled program. Blink -- and it's finished. Clicking on ABORT returns you to the desktop. The compiler contains four major options, STOP, TRAPV, ERRORS and BOMBS that are used for program interruption and error handling.

DOCUMENTATION

The manual is a brief 20 pages long and contains far fewer errors than the interpreter manual. It is still a translation from German, however, so there is some awkwardness. Nevertheless, the manual is imminently usable, especially given the ease of use of the compiler. In fact, the real reasons I read it were to have something to say about it in this article and to find out if I wanted to change the default option settings. (I left them alone.)

SPEED AND FILE SIZE

The compiler ran faster than the interpreter in all tests as would be expected of a good compiler. Compared to the latest version of the Logical Design Works compiler, the GFA compiler is somewhat faster, primarily in the string tests. Results are in the chart at the end of the article.

Having a vague notion that smaller files run faster, I have included another chart showing the file sizes for the various tests. The GFA compiler produced consistently smaller files than the LDW compiler -- even for the two cases where the LDW compiler ran faster! Like I said, the notion was pretty vague.

LDW BASIC COMPILER, VERSION 1.1

INTRODUCTION

Logical Design Works (LDW) introduced a Basic compiler that was reviewed in the October 1986 issue of Current Notes. Recently, LDW upgraded their original to version 1.1. The upgrade includes a number of improvements, the most significant of which is an approximately four-fold increase in speed of math computations. The new version still retails for $69.95. This compiler is compatible with *ST Basic*.

OTHER IMPROVEMENTS

Copy protection has been removed; it no longer sounds as if the drive is being destroyed and it runs fine from a hard disk. The linker in the new version executes much faster than the original, a marked improvement for those of us without much patience. Other new features include:

- Ability to run from a batch file.
- AES and VDI bindings, BIOS hooks.
- Window or full scereen configuration.
- Produce either binary or assembly source code.

DOCUMENTATION

The manual for this version is an IBM-style three ring binder. It is thoroughly indexed and has an excellent, detailed table of contents. This manual is an outstanding example of good documentation.

WHICH PACKAGE?

In terms of overall performance, the GFA package appears to be the winner, but on the basis of cost-effectiveness, the *ST Basic -- LDW compiler* package wins hands down. *ST Basic* is free and it does work (warts and all), so for $70, you have an interactive interpreter for writing and debugging and a very fast compiler. To get the substantial improvement of *GFA Basic* plus the accompanying compiler costs about $90 more. But if you are going to do much programming in Basic and can afford it, do not hesitate to buy the GFA package. It is just superb.

SPEED TESTS (Times in seconds)

Program	A	B	C	D	E	F
LDW Basic v.1.1	8.8	8.2	2.9	6.5	21.6	40.2
LDW, v.1.0	33	21	4.3	8.0	21	94
ST Basic	38	251	31.4	69	304	105
GFA Compiler	11.5	3.0	3.3	3.7	7.8	34.1
GFA Basic interpreter	15.5	13.0	6.1	7.2	23.5	34.3

FILE SIZE (in bytes)

Program	A	B	C	D, E, F
LDW 1.1	16212	16160	15821	18442
LDW 1.0	18439	17527	17025	19866
ST Basic	344	698	283	1160
GFA Compiler	6234	6149	6762	8183
GFA Interpreter	396	556	458	1144

Test Description:
A: 1<=I<=10 000, y = cos(I), x = y * y (Fast cos squared)
B: BYTE magazine Sieve, 10 iterations, n = 2047
C: BYTE magazine Calculation benchmark
D: Generate 1000 random strings
E: Sort random strings
F: Print sorted strings to screen

OGRE
A 21st Century War Game

Review by L. Ian Charters

OGRE is the first commercially available board-style war game available on the ST. The title role is played by a 21st-century, computer-controlled "super tank". A futuristic armored battalion defends a command post, while a single *OGRE* "super tank" attempts to destroy the command post and the defending armored battalion.

OGRE can be played either as a one player game against the *OGRE* or for two with one player controlling the *OGRE* and the other controlling the armored battalion. Those of you familiar with Keith Laumer's BOLO stories will recognize the concept.

The game map itself is the standard hexagonal grid. Within this 15 by 22 hex grid the player is free to position terrain (impassable craters and rubble), and the units in his armored battalion through a simple mouse controlled point and click routine. The armored battalion includs infantry, heavy tanks, light tanks, missile firing tanks, and artillery. Each of these unit types is represented on the map with its own distinctive symbol. Whenever a unit is being either initially placed or moved during the game a menu bar displays the characteristics of that unit type (i.e. the strength and range of its weapons, and how far the unit can move that turn, etc.). This is a nice touch. It keeps the game going without constant reference to the documentation. The battalion will normally include between thirty and fifty of the units described above, although this can easily be increased or decreased by the player, before the game starts, to balance the situation.

The game is a series of turns consisting of the *OGRE* s move and attacks followed by the movement and attacks of the units in the armored battalion. Simple mouse control routines do the job. Units are moved by clicking on them and dragging them to their destination. Attacks are similarly indicated by clicking on the attacking unit and then clicking on the target, a convenient menu bar then appears indicating the chances of the attack being successful. This is all rather straight forward with no arcade skills required. Indeed, you will need to keep all your wits focused on how to 'outs think' your opponent. The tasks of each player are intriguingly different. The *OGRE* must simply hit an individual unit of the armored battalion once to destroy it, yet there are between thirty and fifty of these units in play. The armored battalion commander, on the other hand, must hit the single *OGRE* *between sixty and eighty-six times to destroy it.*

While considering OGRE as a game, remember that *OGRE* is a double adaptation. First, an adaptation of a paper war game, and second, the computer version was seen on other machines before the ST. The first thing ST players will notice is the player interface. It all seems so familiar, the mouse point and click, the icon dragging, the dialogue boxes and the pull down menus. Did you catch that? Pull down menus! The game uses an easy to learn and easy to use "GEM-like" environment (but it is not GEM!). This is true on all the currently released 8-bit and ST versions of *OGRE* This common development scheme adopted by Origin Systems, no doubt, made *OGRE* available on the ST much sooner, more polished and cheaper than if it had been written from scratch for the ST. Of course this also means that the ST version of *OGRE* does not fully exploit the capabilities of our machine.

Despite this, the AI routines controlling *OGRE* in solitaire play, are well thought-out and executed. This can be verified by the player because the *OGRE* decision making process is well explained in the excellent documentation (no question of the game cheating here). While the use of graphics on the ST are not state-of-the-art, the graphics, as well as color and sound effects, do serve well (with destroyed units dissolving from the screen with a transporter-like hum and glow). Origin Systems has come up with a successful over-all design for *OGRE* regardless of the system on which it was implemented.

However, we are still left with the lingering question: How well does *OGRE* make the transition from a paper war game to computer war game? The ST version of *OGRE* sells for a list price of $39.95, and contains elements and features found in the paper version of *OGRE* and its sequel G.E.V., each of which sell for $5.95 (for a total of $11.90). So there is an important difference in price. Additionally with the paper version a player can easily design an *OGRE* tank with any characteristics the player wants -- adding or deleting guns or increasing or decreasing its speed. In the ST version, only two *OGRE* designs are available, although an *OGRE* *design routine would have been simple to implement.*

The ST version has several features lacking in the paper version: the ability to design and save new maps and scenarios, and a game in progress, and a computer record keeper and a computer opponent, in every box. In fact your electronic opponent has three ability levels to chose from! I prefer to play games with human opponents, but a challenging computer opponent, there at the click of the mouse is worth the difference in price between paper and computer versions. Origin Systems and Steve Meuse, the designer, in a first effort, have created an enjoyable ST war game. Let's see more from them.

AEGIS ANIMATOR ST
Learn to Clone, Morph, & Hook

Review by Bill Moes

It's been a wait, hasn't it. While numerous paint programs for the ST were released reasonably early and created a tapestry of excellent quality, the animation software so many of us dreamed of was not to be seen. So we stared ahead, pretending not to notice what was available on other machines. But we did notice. And we did twitch with envy. And we waited. ... now....

Look. Up in the sky. It's a ....

Yes. It flies! The wait is over. *Aegis Animator ST* (AA/ST) is a sophisticated and powerful graphics animation tool. It combines three forms of computer animation, allowing you to freely mix them according to your interests and goals.

METAMORPHIC ANIMATION

This most dramatic of the animation styles begins with the creation of shapes in the form of stars, circles, lines, or free-form polygons. The closed shapes may be in outline or filled form. Tools (Hook and Loop) permit you to grab any part of a metamorphic shape and move it to any part of the screen. Points on the form may be added or removed.

These tools, then, let you take any shape and completely rearrange it. As the animation plays, the shape will shift from its initial to its final form; the software creates all the in-between steps. You may start with a triangle's outline and see it swiftly change into a 3-D starfighter. Or a whole string of shapes may be seen slowly growing out of a tiny circle.

Both the movement and metamorphosis of objects in AA/ST occurs within tweens, or distinct units of time. These tweens may time out from nothing to several seconds with the time for each tween set individually. The tweens are created one after another, gradually putting the bits of animation together in longer and longer forms. During each tween, multiple objects may move in ways diverse and unique. And there is a good assortment of movement styles.

The simplest (Sideways) is executed by grabbing the shape and dragging it to another location. When the tween is played, the shape will make its position switch during the length of time for that tween. A more exact method (Along Path) lets you pick the shape and, with a rubber-band line, drag the path along which you want the object to move.

You may also rotate the shape in one of three ways: around a center, only on the x-axis, or only on the y-axis. The size of the shape on the screen may also be altered (Big/Small). You can take that starfighter's outline and increase its size to literally blow by you, off the four edges of the screen. Or watch it dust off into deep space, gradually diminishing to the size of a point.

Within any tween the shape may change to any of the available 16 low-res colors. An outlined form may suddenly become filled. Or a filled shape may become mere outline. The object created last will pass in front of previously shaped objects. This may be changed (Into or Out of Screen), so you can watch a bird you just made grow smaller and disappear behind those trees in the distance.

When you think you've mastered each of the techniques, how about combining a couple of them. Maybe watch an object rotate as it moves across the screen and becomes smaller. The combinations act in unique ways depending upon the order in which you call them. For example, rotating first and then moving an object will let the object smoothly move while it turns, pretty much as you might expect. Call the movement techniques in the reverse order (move first and then rotate) and you may watch that shape go off one side of the screen to reappear a moment later streaking in from the other side as the tween plays. It takes a bit of trial and error (and more error) to get a handle on the possibilities.

More than one object may be subjected to any individual command. You can literally rotate a full screen of metamorphic objects or move or resize them together. Within each tween you may act upon each shape in individual ways as well. Have one shape rotating and sliding across while another shape is fading off into the sunset. Any shape you create may be duplicated (Clone) or eliminated (Destroy).

Each metamorphic shape is a single color. It will take effort in the overlay of multiple shapes to create any multicolored images. It is easily possible, however, to outline a filled shape with a different color. This two-colored form will then be treated as a single object within AA/ST.

CEL ANIMATION

Cel animation is a common and very useful type of computer animation. We often think of it as page or image flipping. While it also occurs in the tween you're developing, cel animation is separate from the metamorphic animation covered above and, like its morph cousin, it has its own strengths and weaknesses.

It's important to understand that smooth cel

animation is not generally an easy process. The shape to be animated must be redrawn in several different positions. Then, if you've planned carefully, the images flipped onto the screen will create the illusion of actual movement.

Each graphic image needs to be created by a program which saves in *NEOChrome* or *DEGAS* files. Both formats are supported by AA/ST (v.2.07) although the printed documentation mentions only *NEO*. AA/ST does not include any paint software; you'll need your own. Yes, at a higher cost the Amiga version of *Animator* is bundled with the paint program, *Images*. Sorry, not available on the ST.

Cel files are created within AA/ST by loading the predrawn paint image screen, defining the cel within an expanding frame outline, and saving it as an individual cel file. This process needs to be repeated for each cel image you will use.

When you use these cels in an animation, you'll need to load each image at the correct tween and place it on the screen at its proper location. To create the actual animation, you may specify that images placed during succeeding tweens will be exchanged with a previous image. This helps simplify the process of removing a previous shape to place the new one. You may also insert a new image, leaving the previous one on-screen.

When creating the animation, each time you use a cel you'll need to load it. However, when the animation is displayed, all individual cels load when you first load the animation script file. Few of the movement techniques within metamorphic animation are available within cel animation. Cel images may be cloned or destroyed. And they may be moved around the screen. But that's about it. No rotation. No reshaping. No size shifts.

Using a paint program, you may also create an animation background. This will load at the tween you select. Therefore, all animation will stop and wait for the load if you wait until your animation has begun before a background is added. It also means that it's time-consuming and disk-wearing to change backgrounds during the animation. Backgrounds may also be wiped off the screen during a tween.

COLORS: CYCLING AND CHANGING

The third type of animation possible with AA/ST is the well-known color cycling. One set of colors may be cycled. We've all seen it. We've all used it. There are a couple of refreshing additions to this potential which deserve notice.

Select individual tweens during which you want the colors to cycle. The color palette may be altered at each tween and the set of colors to cycle may also be altered. Fade all selected colors to a marked color within a tween. Or set a new range of colors between any two colors. You may also click for a spectrum of colors between any two selected colors. This rainbow spectrum can often be an appealing collection of colors, a collection you may otherwise overlook in creating a color palette. Individual color palettes may be saved, to be loaded at any tween.

YOU ARE THE DIRECTOR!

There is certain flexibility in putting the animation together.

An individual animation sequence may be developed and saved as a strip animation. It may then be loaded into your animation at the proper tween, to play once or to loop repeatedly.

A storyboard screen is provided to edit the animations. Within this storyboard, you may, with sufficient computer memory, edit up to six separate animation sequences, tying them together or pulling them apart. Tools (Cut, Splice, and Delete) are provided.

Each of the six storyboard animations may be individually activated. It is truly an amazing sight to watch six separate sequences running concurrently, each in its own mini-screen on the storyboard screen!

While AA/ST is GEM-based software and the drop-downs provide full access, a Fast Menu is also provided. Essentially, this is a movable window containing the most useful tools and providing access points to other menus. Simply click on the icon to make your selection. I found this extremely helpful in quickly selecting the tools to use.

It's quite possible to include all three types of animation within one sequence. A demo provided with AA/ST shows the lengthening shadow (metamorphic) of a landing helicopter (cel) while a dinosaur (cel) wanders across the screen. It could have included shifting (cycle) greens of the background forest.

An Undo is available throughout to do the erase for that just-done mistake. A Help line is also available, offering a memory-jog for the tool you've forgotten about.

The animation script files are saved in ASCII format. This makes it possible to completely develop the script with a word processor, without ever looking at an actual animation. I assume that this is for those who have passed beyond the stage of being mere mortals. Those of us who never made it up the slopes of Mt. Olympus may find the ASCII format useful as a way to fine-tune a completed script.

OTHER NOTES

The documentation is a 156-page spiral-bound book. It includes 19 drawings or screen shots, an index, a glossary, and a quick-reference guide. The text does an excellent job of explaining the software, leading you through those nervous early creations, and offering suggestions and ideas.

A *Player* program is provided so you may distribute your animations to those who do not own AA/ST.

AA/ST was written by Jim Kent (I wonder if Clark is his brother.), runs in low-res only, and offers no provision for sound. The $79.95 disk from Aegis Development is not copy-protected.

A COMPARISON FEATURETTE

Make It Move (MIM) (reviewed in *Current Notes* March 1987) offers some competition to AA/ST. The animation in MIM is restricted to cel style, although that software does not use the particular term. MIM may have multiple cels (or objects) stored on a single screen and this saves memory and offers much easier access. AA/ST offers the ability to exchange cels quickly, although you'll need to load a cel each time it's used when creating the script.

MIM makes the use of multiple background screens extremely easy and flexible. This is not something most are apt to even try with AA/ST because of the time and disk use. MIM also lets you easily create zooms (horizontally, vertically, or on both axis). AA/ST has no such capability.

MIM has clear and definite advantages in presentations using numerous full screens and in use by those who might be put off by the relative complexity of AA/ST. AA/ST has the advantage in using several types of animation, including an especially exciting visit to the magical Land of Morph.

While they do have limited similarities, the differences are very pronounced. We've had a long wait and now competition has begun offering the opportunities we each seek. Let's enjoy.

THE WISH-IT-COULD SECTION

AA/ST is not perfect (and how many times have you seen those words?). It would have been of some help if there were keyboard alternatives to the mouse use. In using the GEM drop-downs, I found the mouse to be somewhat unresponsive at times, necessitating several clicks before the choice was latched. In selecting the metamorphic forms (polygon, star, circle, line) I would sometimes find pixels deposited on the screen beneath the menu mark. While they could be destroyed, it was an inconvenience.

Of more importance, though: I would have enjoyed seeing additional possibilities with cel (raster) images. Why not work out a way to rotate or resize or reshape the things. Or offer software-generated transitions from one cel image to a strikingly different one.

FADE OUT

Metamorphic animation. Cels. Cycling colors. The storyboard. GEM plus a Fast Menu. Do you get the idea that there may be some remarkable capabilities here?

Aegis Animator ST is a program for those willing to search through its many possibilities and challenge its vast potential. For those so willing, *powerful* rewards!

MEAN 18 GOLF TOURNAMENT
Accolate vs Current Notes

by Frank Sommers

The ball went straight for the cup on the 18th green and then seemed to expire forever as it clung to the lip. The man, sweating and visibly strained by the kind of concentration you can only find in the Oval Office these days, let out a whispered oath. The birdie he'd needed to end up with a 69 had just evaporated before his strained and unbelieving eyes. But at least it was over, and the tension began to leave him also. The back nine had almost broken his back.

The gauntlet for the match had been thrown down a month earlier. Jon Correll, Accolade's Product Development Manager, had courageously accepted the challenge for an 18-hole tournament, without knowing if his players were trained up and ready. But he mentioned something about someone having shot a 65 or somewhere in that range, and that in turn shot a little stream of concern, if not fear, into the normally ice water veins of the Current Notes golf team. And quickly back to the course they went for more practice.

The day of the tournament had been set for the first weekend in March. On that glorious spring day in Washington, but dark, foreboding, rainy day in Cupertino, CA, the mighty stickmen, all veterans of *Mean 18*, assembled electronically at Burning Witch Country Club. (The course had been specially designed by Joe Kuffner of Relax and Enjoy fame, and shipped the month before to Accolade, so that both sides would have no extra advantage. Neither they on the courses they designed for the *Mean 18* golf program, nor we at CN because we had a course they weren't familiar with.)

And what a course! Burning Witch was just that -- a genuine nasty witch of a course, with BAND-AID size greens fortified on all sides by traps, trees in the middle of the fairway, 650 yard par 5 holes, a par 37 back nine, par 4 holes that only with 3 flawless shots in succession could you hope to 1 put for par. And that was what we had suggested, we at CN could play better on than the men who had developed *Mean 18* for the ST, the guys who were the Bobby Trent Jones' of electronic course design.

So the battle of East against West, one winner, total medal score against total medal score, three men to the team, began. Hopefully the difference in the weather would favor the mighty authors instead of the crafty programmers. One thing was certain, *Mean 18* meant that the players respect the need for intense and continuous concentration to keep their hand-eye coordination under control and make sure, for example, of such things as proper club selection for the right distance. On the drive a missing the snap line by a millimeter can cause you to hook 50-60 yards from the center of the fairway, or even send you out of bounds. Sometimes a 30-yard deviation from straight down the middle will cause that agony of agony's, a splash! and you're shooting 3.

More than once during the weekend the concentration rule was violated, e.g. using a driver eight yards from the green unleashed a typhoon of anguish and expletives, as your ball rocketed over and 230 yards past the green.

By dark on Sunday, one of the CN authors, Milt Creighton, was still out on the course, unlikely that his final score would be known before morning. Gloom was everywhere. Creighton was known for his keen ability to balloon a score card. The other two players, ST Editor Sommers and Kuffner had been unable to break 70, certainly a necessity if they were to stop and top the Cupertino Slasher's from Accolade. The best estimate was that three times 70 for 210 would be too high. A 205 to 209 would likely win; or so said the sharp pencil experts from CN. That meant Creighton would have to shoot a 68 or better!

Monday Morning dawned and no call from Creighton meant he was likely not busting the spats on his golf shoes over his score. A check of government files indicated that indeed, the rest of Correll's team scored regularly in the low 70's and lower! Accolade's Custom Service Manager, Steve Caudle was already known throughout the area for having trouble assembling a family because of the hours spent away from home on the course and afterwards. But score he could. And Tim Larkin, the man who likely knew where most of the Iran arms $$$'s had gone, as Vice President of Finance, was out of the office most afternoons, tuning his drives and chip shots. With that information at hand, the CN team began practicing their best HHP performance (humility and humble pie), and when Creighton finally called in from the Pentagon, reporting not a 68 but a soaring 75, the Fat Lady was ready to sing.

Jon's call from Accolade was a stunning surprise. Accolade had totaled a 223 and lost by 7 strokes! How gracious. We immediately accepted the challenge for a rematch to be played in April. Correll said that there were six new professional courses about to be released for *Mean 18*, (the program is $49.95; Famous Course Disk, Vol.II is $29.95, and tough it is) all on The tour. We could have our pick for the rematch. His suggestion was Los Colinas or Olympia in San Francisco. We assured him, that stunning as the new courses sounded, unless his team was hesitant, we hoped to stick with Burning Witch. Any other players?

ST CHESS: PSION vs TECHMATE

Review by Keywood Chees and John Crowll

There are as of this writing two chess programs available for the ST computers; One is *PSION CHESS* from PSION Inc. ($59.95) and the other is *TECHMATE* from SZABO SOFTWARE ($49.95). This review will give some basic information on the physical layout and strength of play for both, and is written more for the chess player who owns an ST than an ST owner who wants to see what a computer chess program is like.

	PROGRAM	HARDWARE	Psion	Tec.	Sarg.	Totals
1.	PSION	520ST	-	2	1	3
2.	TECHMATE	520ST	0	-	0	0
3.	SARGON III	APPLE II+	1	2	-	3

A small round robin tournament (chart above) was conducted between these programs and what is considered one of the better APPLE (dare we even mention that name?) chess programs, *SARGON III*. This was done to give a slightly better idea of how well the ST programs played. Each program had an opportunity to play white and black, against each of the other two. One point was awarded for a win and no points for a loss. Before getting into an analysis of the tournament results, lets take a look at the physical layout of both programs.

In its capabilities, PSION is superior to TECHMATE. PSION has many useful features which TECHMATE either does not have or which requires inconvenient manipulation to simulate. PSION provides these capabilities in easy to use GEM menus while TECHMATE requires remembering where on the monitor to click the mouse to execute its functions. The serious chess player (defined as those who compete in tournaments) will find that PSION has all the capabilities desired to make game analysis an easy chore. Both programs have nice board displays, however, the green and orange TECHMATE board is a bit much. Try the monochrome. The 3-D board in PSION is a nice touch, but it can get confusing. Due to what we consider insufficient tilt to the board, one can sometimes lose track of the pieces. More tilt or an adjustable tilt (preferably) to the board should alleviate this problem. This problem should not keep one from purchasing the program. We both prefer playing PSION's 2-D board (which also displays a list of the most current 12 moves), but would prefer that it was a little larger. The 2-D display also shows the chess clock above the move record. The TECHMATE board display takes up nearly the entire screen and is extremely easy to read. The right hand portion of the screen has a clock and an area to display stop, start, and quit commands. The clocks for both sides are set in seconds (9999 max) and count down to zero.

So much for physical layout. Lets look at the strength of play - the real measure of a chess program.

	CAPABILITY	PSION	TECHMATE
	COLOR	X	X
	MONOCHROME	X	X
3	PLAYER VS PLAYER	X	X
1	PLAYER VS ST	X	X
3	ST VS ST	X	*[b]
3	MASTER GAMES	X(50)	
3	MULTILINGUAL DOCS	X(6)	
1	LEVELS OF PLAY	X(14/28)[a]	*[b]
2	HANDICAP	X	always
1	PROBLEM SOLVING	X	X
3	3-D DISPLAY	X	
1	2-D DISPLAY	X	X
1	INVERT BOARD	X	
1	CHANGE SIDES	X	X
1	SHOW ANALYSIS	X	
1	SAVE GAMES TO DISK	X	
1	CLOCKS	X	X[c]
1	HINT	X	*[b]
1	TAKE BACK MOVE	X	X
1	OFFER ST DRAW	X	
1	ST RESIGNS	X	never
1	FORCE ST TO MOVE	X	
2	REPLAY GAME	X	
1	SHOW GAME MOVES	X	
2	PRINT MOVES	X	
2	PRINT BOARD	X	

[a] By using or not using the HANDICAP capability. When using HANDICAP the ST will not think on your time.
[b] May be simulated by manipulating other capabilities.
[c] PSION - clocks show elapsed time.
TECHMATE - clocks count down and may be set to different amounts of time.
1 A must capability for any serious chess player
2 A very helpful capability which aids game analysis or playability.
3 Nice to have but won't miss it if not there.

Program vs program, *PSION* is without a doubt the more powerful. It easily defeated *TECHMATE* in both its games and used significantly less time to determine its moves.(It split games *SARGON III*.) *PSION*'s opening book extends six moves and *TECHMATE*'s extends for four moves. *PSION* still makes some "computer" moves, questionable from a strategic standpoint, but this is a common computer failing. *TECHMATE* has been touted as

(Continued on Page 61)

ARTWORX'S BRIDGE 4.0
A 4-Handed Work of Art for 1

Review by Robert W. Ford

Like to play bridge? Having trouble getting a foursome together for an evening? Love your ST? Well, don't give up. There is *Bridge 4.0* by Artworx, if you are willing to play all by yourself against the computer.

A serious bridge player, someone with life-master points, may not enjoy it. But it is a good program for someone who wants to learn more and needs practice. It is better than buying a book and dealing your own hands, once your know the basics of bidding.

To play, you must first load ST-BASIC without any desktop accessories on the boot disk. With TOS in ROM, you turn on the computer, select medium resolution, enter BASIC. (Otherwise, boot with the TOS disk if you do not have TOS in ROM. You will need a copy of both the TOS and ST-BASIC disks that have the desktop accessories removed.) You know by now that the program is written in Basic and is very large.

The time it takes to load both ST-BASIC and *Bridge 4.0* is excessive. I mean you have time to read an article in Current Notes -- twice.

You will use a mouse for all commands. Graphics show best in color, but you can use a TV or black and white monitor. You can change the colors using function Keys.

When you are ready to play, the first decision to make is do you want to have an opening hand on every deal or not. The computer will then shuffle, deal, and sort the hands. You will see you cards and a line displaying the bidding. If you have selected to always have an opening hand, you will bid first. To bid, a two-character format is used, S for spades, H for hearts, etc., and 1 thru 7. You can also pass or double and be doubbled. Cards are shuffled in random order using a random number generator.

Bridge 4.0 incorporates the main ingredients of Goren's point-count bidding system. If you have not selected to always have an opening hand, your partner (north) will open with a bid at the one level if the hand has a minimum of 13 high points, at the two level with 22 points, and one no trump with 16 to 18 points and even suit distribution. North has been programmed to respond properly to the Blackwood Convention by bidding '4 NT'. You will not see the dummy until after the first trick has been played.

You are playing against the computer for the other two hands. The program is consistent, however, in how it plays its hands. For example, it appears that everytime a lead is made by one of the two opponents, they will take the trick if high cards are outstanding. In other words, it leads a low card to a high card. It can not finesse or can't be finessed.

You can replay or rebid and replay a hand and see all the cards after the hand has been played. If you have a few hours on a snowy evening and are too old for *SUNDOG*, you might give *Bridge 4.0* a try. But, don't call me for a fourth, I already have a bridge game going, (when not playing my first love -- *LEADER BOARD*).

* *

ST CHESS (Continued from Page 60)

having an algorithm three times better than that of one time Computer Chess Champion BELLE (1982). This may be a true statement. It is misleading whether true or not. The strength of BELLE comes not from its algorithm but from its hardware configuration. BELLE played above a 2200 level in 1984. If *TECHMATE* were comparable to BELLE, there is no way that any of the human players mentioned below could have beaten *TECHMATE*. We think all chess programs should acquire a rating from the United States Chess Federation so that the serious chess player may make an informed purchase. Firms interested in taking this laudable step should write to USCF Technical Director Randy Hough, 186 Route 9W, New Windsor, New York 12550 for further information.

Human vs program? Judged on playing skill alone, both programs play well. *TECHMATE* probably will not prove itself as much of a challenge to players rated above 1200 as *PSION*, but would probably be a good choice for lesser rated players. We've seen *TECHMATE* lose at an acceptable rate to human players, so those looking for only a playing partner should be happy. *TECHMATE*'s forte is "speed chess"; with a 5 minutes clock limit it is formidable. *PSION* will lose at an acceptable rate when the Novice playing level is selected (*PSION* plays weaker when ahead). At normal playing levels, we have only seen one win and one draw out of approximately twenty-five games against *PSION* (humans rated from 1151 to 1650). If you are a strong player and want to improve, *PSION* is the game. Judging both games on price versus capabilities and playing strength, *PSION* is the only program we can recommend buying. Why buy a Volkswagon when ten dollars more will buy a Ferrari?

WAACE XL/XE DISK LIBRARY

We are introducing 9 new (*) library disks this month. Game Disk #12 is a fun-filled Ski game for downhill-racing joystick jockeys of all ages. The Education Disk #3 is the Teachers' Toolbox, a modular BASIC program with a database for grade and attendance records as well as an adaptable letter to parents which can calculate interim grades. Several new utility disks have been added. #13, a double-sided disk, is a Print Shop Editor that is joystick or Koala pad driven with 55 icons on side B. #14, Easy Find is a magazine database system for indexing ANALOG, COMPUTE and ANTIC with sample data for September and January (Index disks from 1983 to present are available from SIERRA). More Print Shop Icons (220, count 'em) fill both sides of disk #15. Disk #16 is a full-featured word processor, TEXTPRO 1.1, complete with documentation. Finally, note that Language Disk #10 is the much-touted TURBO BASIC with documentation and many other features. (See the articles in CN Vol. 7 No. 1, February 1987)

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¦chapter meeting or by sending $20, payable to ¦
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¦Vienna, VA 22180. ¦

LOCAL NOVATARI CHAPTERS

Mt. Vernon / Hybla Valley meets the first Thursday of each month at 7:30. Contact Ron Peters at 780-0963.

Sterling meets in Sterling Library from 7:30-9:30 on the 1st Wed. of the month. Contact Wayne Wilt 437-6159.

Vienna meets in room 10 at the Vienna Elementary School, 128 Center St. SW from 7:30 - 9:00 on the third Wednesday of the month. Contact Dave Heagy at 281-9226.

NOVATARI MAIN MEETING is at the Washington Gas Light Building, 6801 Industrial Road, Springfield, VA. Meetings are usually held the second Sunday of each month. Take 495 to east on Braddock Rd (620) to south on Backlick Rd (617). Left on Industrial Rd (by a light with a Texaco station on the corner). Washington Gas Light is the second building on the right (big parking lot, go right in the front door).

TIME PERIOD	BIG AUDITORIUM	SMALL AUDITORIUM
5:30 - 6:00	Beginners SIG	Telecom SIG
6:00 - 7:00	Speaker or Demo	- N/A -
7:00 - 7:30	Business & Open Forum	- N/A -
7:30 - 8:30	8-bit SIG	ST SIG (VAST)*

* ST SIG also meets at Washington Gas Light from 5:30 - 9:30 on the fourth Sunday of the month.

President's Report

At the March meeting Creative Solutions donated a demo disk to the ST library with the moving graphics created with MULTI FORTH, an interactive language like basic that is also available for the Mac, Amiga, and HP. Cherian Zacharian, product manager for CS, showed the power, ease, and speed of MULTIFORTN, all for $89.

Because Current Notes arrives often after our meetings, here are the future dates to mark on your calendar now.

April 12 Diskcovery A store at Seven Corners catering to Atari tastes will show the new flight scenes for us to master with Flight Simulator. This is especially for you that can land in front of the Statue of Liberty with no sweat.

May 17 John Baum of Computer Service Land will teach us how to care for and repair printers and disk drives. I want to know what happens when ants get into them.

June 14 Something great!

July 12 Genie, an inexpensive alternative to CompuServe, will be explained to us by J. Saur. This information service is also used by the Atari Corp. on the Atari Sig.

There is always room for special interest groups to get together under the umbrella of Novatari. There are 35 women out of 600 members. If they wanted to start a Sig to combat the fact that few women enter the computer scene, they could. Ron Peters is looking for Ham/Atari operators to start a Ham Sig.

Did you buy a 600XL? You can exchange it for an 800XL by sending these three items: 1) the 600XL, 2) a check for $35, 3) a letter requesting the exchange with your return address. Send these to: Atari Consumer Product Service, 390 Caribbean Drive, door #17, Sunnyvale, CA 94089.

Infoworld included the Atari PC in its buyers guide of XT compatibles. The Atari PC is the least expensive by $100. Others close in price did not include monitors or a floppy disk. A picture of it was displayed at the March meeting. Now, if we could get our hands on it.

Reading Gregg Anderson's article in the March Current Notesbrought back with pleasure my visit with the ATARI CORP. in Sunnyvale in January. Gregg understands the highly technical aspects and asked questions that left me gaping. I am glad he was there with me or I could not have told you what I did at the meetings. I then gathered information on how to get ATARI back east to you. They came in the form of Sandi Austin in February and will come again in October. We also hope for some inbetween visits from ATARI CORP.

ATARI USERS REGIONAL ASSOCIATION (AURA)

President.....	John Barnes.....	301-652-0667
Vice President....	Barry Marcus.....	301-926-3660
Treasurer.....	Mo Sherman.....	301-563-1097
Membership Chmn...	Richard Stoll....	301-946-8435
Educ. Liaison.....	Bill Schadt.....	301-622-1547
Disk Libr.(XL/XE).	Bill Frye.....	301-345-4336
Disk Libr (ST)....	Jeff Kellogg.....	
Public Relations..	Richard Stoll....	301-946-8435
Used Equip Sales..	Lincoln Hallen...	301-460-5060

MEETINGS 1st Thursday (February 5). 7:00 pm (library sales). 7:30-9:00 pm (Program) in the Temple Israel Social Hall. Temple Israel is located in Silver Spring, MD at 420 E. University Blvd. between Colesville Rd (Rt 29) and Piney Branch Rd (Md Rt 320).

CORRESPONDENCE: All correspondence, including NEW MEMBERS, membership renewals, changes of address, etc. should be sent to: AURA, P.O. Box 7761, Silver Spring, MD, 20904. AURA cannot guarantee Current Notes subscription fulfillment unless the member provides written confirmation of address changes, renewals, etc. Annual Dues are $20.

NATIONAL CAPITAL ATARI USERS' GROUP (NCAUG)

President.....	Peter Kilcullen..	202-296-5700
Vice President...	Mike Pollak.....	703-768-7669
Treasurer.....	Allen H. Lerman..	703-460-0289
XL/XE Librarian..	Mike Pollak.....	703-768-7669
ST Librarian.....	Enrique Seale....	202-295-0112

MEETINGS: 3rd Tuesday, 5:30 - 8:30 pm, room 543, National Science Foundation offices, 1800 G St., NW, Washington, DC. Closest subway stop is Farragut West on the Blue and Orange lines. Building is identified by sign for Madison National Bank on the corner. Front entrance is on west side of 18th between F and G.

NEW MEMBERS may join at meeting or send $20 check, payable to NCAUG, to Allen Lerman, 14905 Waterway Drive, Rockville, MD 20853. Membership includes a subscription to Current Notes.

WOODBRIDGE ATARI COMPUTER USERS' GROUP (WACUG)

President.....	Jack Holtzhauer..	703-670-6475
First VP.....	Arnie Turk.....	703-670-2547
Board Member.....	Bill Parker.....	703-680-3041
Board Member.....	Lou Praino.....	703-221-8193
Board Member.....	Darrell Stiles...	703-494-9819
Treasurer.....	Curtiss Pieritz..	703-494-3704
Secretary.....	Frank Bassett, Jr	703-670-8780
Librarian.....	Charles Stringer.	703-786-8755

MEETINGS: 3rd Tuesday 7-10PM, Community Room, Potomac Branch, Prince William County Library, Opitz Blvd., Woodbridge, VA. ST SIG meetings: WED FEB 4th 7-10PM; MON MAR 30th 7-10PM, THU APR 30th 7-10PM; SUN MAY 17th 2-5PM; MON JUN 22nd 6-10 PM. Entering Woodbridge from either North or South on Route #1, proceed to the intersection of Route #1 and Opitz Blvd. (opposite Woodbridge Lincoln-Mercury). Turn West on Opitz and take first left turn into the library's parking lot. The Community Room is located to your left immediately upon entering the main building.

NEW MEMBERS: Initial membership fee is $10/yr plus $1 monthly dues. Join at meeting or send check, payable to WACUG, to Frank W. Bassett, Jr., 15313 Blacksmith Terrace, Woodbridge, VA 22191.

SOUTHERN MARYLAND ATARI USERS' GROUP (SMAUG)

President..... Thomas Crosby.... 301-843-1310
Sec/Disk Lib..... John J. Smith.... 301-862-9490
Treasurer..... Samuel Schrinar.. 301-843-7916
Newsletter Ed.... Leroy Olson..... 301-743-2200

MEETINGS: 2nd Thursday, 7:30 pm, John Hanson Middle School in Waldorf, MD. Take MD Route #5, proceed about 1/2 mile East of the intersection of Route 301 and take first left past the Kinney show store to school.

NEW MEMBERS may join at the meeting or send $20 check, payable to SMAUG, to Sam Schrinar, 2032 Alehouse Court, Waldorf, MD 20601.

NAMELESS ATARI USERS GROUP (NAUG)

President..... Dana O'Hara..... 301-798-0566
Vice President... Steven Drucker... 301-798-4459
Treasurer..... Ted Martens..... 301-798-4218
SYSOP..... Bob Eyester..... 301-267-6261
Bulletin Board... California BBS... 301-263-8776

MEETINGS: 2nd Sun. each month unless otherwise specified in Davidsonville, MD (suburb of Annapolis) 1:30-4:30 pm at residence of Dana O'Hara (3475 Manassas Ct.). From DC take route 50 west to Davidsonville Rd (Rt 424) exit, proceed on 424 until left on route 214 (Central Avenue). Continue on 214 for 1 mile and make left into Hardesty Estates (Vicksburg Rd.) At Stop sign, make right onto Appomattox Rd. Take 1st right onto Manassas Ct.

NEW MEMBERS: Join at meeting. Dues are $20 per year and include a subscription to Current Notes.

FREDERICK ATARI COMPUTER ENTHUSIASTS (FACE)

President..... Mike Kerwin..... 301-845-4477
Vice President... Roger Eastep..... 301-972-7179
Treasurer..... Buddy Smallwood.. 301-432-6863
Librarian..... Chris Bigelow.... 301-662-4691
Secretary..... John Maschmeier.. 301-271-2470
SYSOP..... Chuck Grasser.... 301-831-9092
Bulletin Board..... 301-865-5569

MEETINGS: 4th Tuesday, 7 - 9:30 pm, Walkersville H. S., MD Route 194, 1 mile north of MD Route 26 (Liberty Rd).

NEW MEMBERS: Dues are $25/year/family. Join at meeting or send check, payable to FACE, to Buddy Smallwood, P.O. Box 300, Keedysville, MD 21756.

SECRETARY'S REPORT: At the March meeting, we held the annual election of officers. Those changes will be reflected in the next issue. We also had a demonstration of *Silent Service* on both the 8- and 16-bit machines presented by Tom Jackson and Mike Kerwin and a report from those members who attended the Atari Expo in Allentown, PA.

At the April meeting, Mike Kerwin will show us the new ALADDIN Magazine, which is the newest magazine to be published exclusively in disk format. It is available for the 8-bits and for the ST. Buddy Smallwood will also demonstrate *DOLLARS AND SENSE* a home financial manager for the ST.

<> To join any of these clubs, or to RENEW your membership, fill out the form below and send it, with the appropriate club dues, to the club of your choice -- see the information listed under each club's NEW MEMBERS section. DO NOT SEND CLUB RENEWALS TO CURRENT NOTES. <>

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