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Current Notes

Vol. 7 No. 6 July-August 1987

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SPECIAL FEATURES

PRODUCT REVIEWS

REGULAR FEATURES

CURRENT NOTES (ISSN 8750-1937) is published monthly (excluding January and August) by Current Notes, Inc., 122 N. Johnson Rd., Sterling, VA 22170. Direct subscriptions to CURRENT NOTES are available in the US for $20 per yr. Second-Class Postage paid at Sterling, VA. POSTMASTER: Send address changes to Current Notes, Inc. 122 N. Johnson Rd., Sterling, VA 22170.

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The ST EDITOR is Frank Sommers, 4624 Langdrum Lane, Chevy Case, MD 20815 (301) 656-0719. The XE/XL EDITOR is Jack Holtzhauer, 15817 Vista Drive, Dumfries, VA 22026 (703) 670-6475. 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.

EDITORIAL

By Joe Waters

As many of you are aware, CURRENT NOTES has received a good deal of critical acclaim within the Atari community. The enthusiastic support we receive from our readers is not because each issue has a lot of information (this one, for example, is 72 pages), nor because each issue "looks nice" (even though I still rely on my trusty $4 ST Writer to produce final copy). People like CURRENT NOTES because they enjoy READING it. And they enjoy reading it, because our authors do such a fine job. As I have said in these pages before, it is our authors who set the standard for CURRENT NOTES.

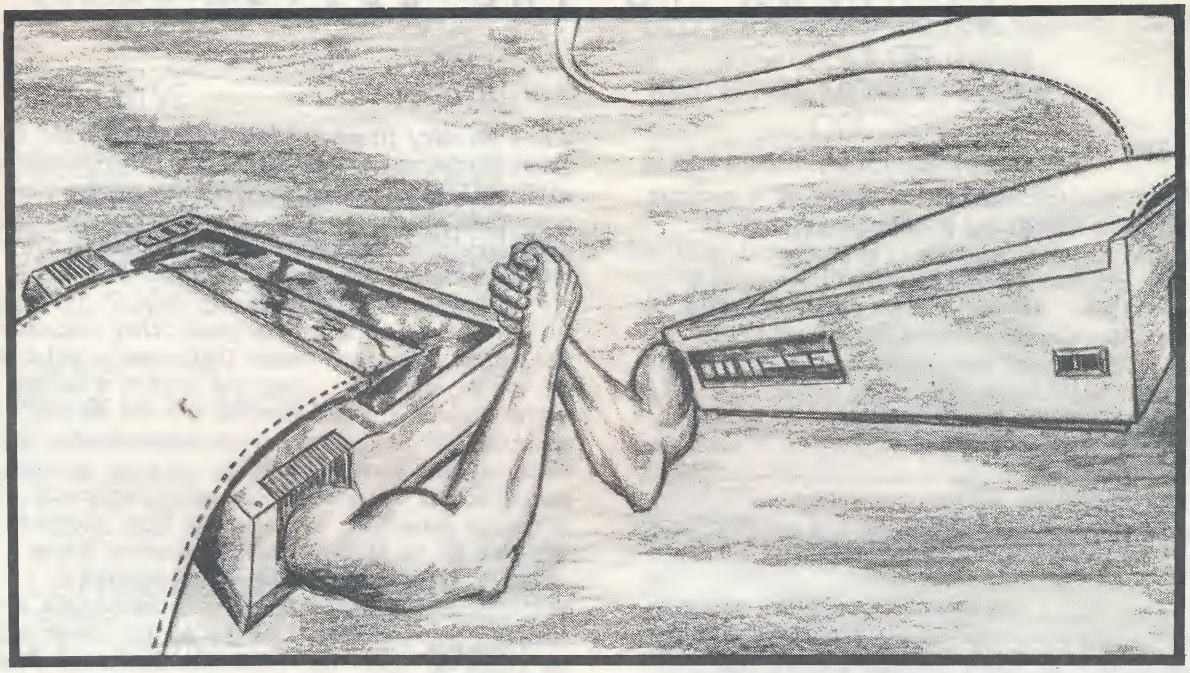
• So, the editors got together and decided to provide a few "awards" of our own, the first in what, I suspect, will be an annual event. We have chosen an outstanding CN columnist and an outstanding CN reviewer. The columnist award goes to a man who has been writing for CURRENT NOTES longer than I have been editor. I know that quite often, he spends as much time doing research and writing as I do putting the rest of the newsletter together! We have all benefited enormously from his dedication and expertise. The first annual award for outstanding columnist goes to Bob Kelly for his "Atari Scuttlebits." (Bob's on vacation this month, watch for his next column in September.)

CN is blessed with many talented and knowledgeable reviewers. One, however, has distinguished himself this past year. He has contributed to each of the last 10 issues and has written his reviews in a style that is both informative and entertaining. Our educational expert, he started out by telling us all about Winnie the Pooh. We liked that so much, we asked for more and we got it: Adventures in Learning, Homework Helper Math, Maps and Legends, Net Technology Coloring Book, Read & Rhyme, Speller Bee, Buzzword, Mathtalk. His artistic flair was equally apparent in his reviews of the "creative" ST software: Degas Elite, Make It Move, Aegis Animator, and ColourSpace. The first annual award for outstanding reviewer goes to Bill Moes.

Each winner was allowed to choose the "prize" they most wanted. Bill Moes chose a one-meg upgrade for his 520. Bob Kelly opted to receive Dave Small's "translator box" so he can read and write Mac disks with his Magic Sac when it becomes available. Congratulations Bob and Bill! Many thanks from all of us.

Joe Waters

When Printers Get Down to Business



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LETTERS TO THE EDITOR

Dear Joe,

Your readers may not be aware of a serious bug in Kyan Pascal -- I have never seen it mentioned in any magazine. Kyan Pascal will not compile and run a program which uses random access files. It won't even run the sample program "SeekDemo" on page IV-149 of their manual. For about seven months the Kyan people have been telling me that they would have a fix "real soon now." I most recently sent them a letter on COmpuServe, and received the attached reply. Frankly, I don't understand what they mean by "hardware difficulty," but the bottom line is that one still cannot use random access files with Kyan.

Atari users who may be tempted to get Kyan Pascal, as I did, in order to write custom data bases should be aware of this deadly bug.

John Godbey
Alexandria, VA

From: Kyan Software [73225,450]
Subj: RA File Bug

Dear Mr. Godbey:

The problem you are experienceing with random access files is due to a bug in the Kyan Pascal runtime library, LIB. The bug has been fixed but we are having some hardware difficulty and are threfore unable to issue an update at this time. We do expect to have an update out soon, however, and you can be one of the first to get it. Watch for news about it in the Atari 8-bit forum, where we now share a subtopic and sata library with ICD and OSS. (We will post a new LIB file there.)

--Erik Warren

Dear Mr. Waters,

Steve Welch's letter to the editor in the June issue of CN afforded me a very scary look at what is lurking in the hearts and minds of many loyal Atari users. To your readers I'd like to say that although I understand and share the frustration of my fellow 8-bit computer users, I don't think that it is fair to dump our grievances on the doorstep of the Atari Corporation. In my opinion, Jack Tramiel is delivering exactly what he promised us. "Power Without the Price". I own both an 800 and an ST and I am very pleased with both machines. The Atari Corporation has consistently provided us with reliable, friendly, and inexpensive computers which, in turn, have encouraged the development of software and user bases that rival any machine on the market today.

Over the years I have used other computers including Apple and Texas Instruments and I must say that your Atari computer offers a better value than any other machine on the market. For example, do you know that an Apple dealer will charge you a cool $149.95 to replace an Apple IIc motherboard? You might be asking yourself, "How often is something as major as that necessary?" The answer is ALMOST ALWAYS, because Apple doesn't allow THEIR dealers to repair motherboards. All defective motherboards are swapped out and sent back to Apple. Neat huh? My point is that for those who fault the Atari Corporation on their service, there are alternatives. (Lightning Flash! ... Sinister Laugh).

Mr. Welch's letter did bring to mind a couple of very important questions for the 8-bit Atari community. Where... have all of those great new 8-bit titles gone? It's really no great mystery. A quick trip to your local all purpose computer store will reveal that there are some new kids on the block in the form of various IBM clones and 16-bit friends and foes. Our lack of new 8-bit Atari software is a reflection of the confusion-paranoia programmers face when marketing new software titles. Programmers currently view the IBM PC as a lucrative new market for software-hungry users. Second, where do we as users want our 8-bit computers to fit in? I know that I still get a lot of enjoyment and usefulness from my 8-bit computer.

One thing is certain, to insure the future popularity of the Atari 8-bit computers, we will need to show support for new products with our dollars (pirates beware), we must be quick to voice our wants to software distributors and programmers, accept that the Atari version of a product may not be the first version released, but may ultimately be the best, and finally, we should be content knowing that we really do own the best machines on the market today.

Robert Reitz
Sunbury, PA

ATARI 8-BIT

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CES IN REVIEW

Atari Games Flying High in Chicago

By Kirk Osterman

Come fly with us! This was Atari's slogan for the Summer Consumer Electronics Show (CES) held in Chicago May 30 through June 2. The theme of Atari's booth this year was "Flying High" and was decorated to look like an airport complete with signs, flight attendants and a full sized Piper Cub perched atop their display. As has been the case with the past several CESs, Atari's booth was one of the busiest with crowds packing themselves in to see what Atari has to offer.

The Mega ST, Blitter upgrade and laser printer were not being shown. Atari said that these products were aimed at computer specialty stores and not the mass market which is what CES is primarily for. However, there was some news about the Megas. Neil Harris of Atari Corp. stated that the Megas name will not be changed, which is contrary to other reports. Also, he said the Mega ST2 and ST4 are on a ship heading for our shores NOW and should be available by the time to read this in July. The Mega ST1 has officially been shelved because it overlaps too much with the current 1040ST market. In a short conversation with a reporter from a German ST magazine, it was learned that a shipment of 200 Mega STs were recently received by German software developers. In a dark corner of their display, hidden in the shadows, Atari had a 520STFM (internal disk drive) running Flight Simulator II on a big screen TV. No signs pointed the unit out and there was no mention of this model anywhere in Atari's literature, but it was there. Your guess is as good as mine as far as what their plans for it are.

The Atari PC (APC) was at the show running *Lotus 1-2-3* and some impressive color graphics demos. On the morning of the first day of the show, Atari could not find the keyboard for the APC. After searching for it for a while, someone came back to the display with an IBM keyboard and plugged it into the APC CPU. This improvised solution worked just fine and it drew some chuckles as people saw the IBM logo on the keyboard. The actual APC keyboard was found shortly afterwards and was quickly swapped. According to an Atari representative, the APC will not only come with *GEM Desktop* and *MS DOS*, but will also include *GEM Paint* and *GEM Write*. The expected price is $499.00 without the monitor ($699.00 with a monochrome monitor) and is to be available in July.

For the XEs, Atari was showing a new 5 1/4" disk drive called the XF551. This drive is supposed to be considerably faster than the 1050 drive, to be true double density, and to include ADOS which supports sub directories. The XF551 was said not to be in production yet and no availability date was given other than sometime in 1987. The price of the unit should match that of the 1050. They were also showing the XEP80 and SX212 1200 baud modem. The delay in these products was blamed on parts availability, however, according to Atari, they are now in production. If they go ahead with their plans to buy their own semiconducter plant, problems like these could be lessened because they would no longer have to depend on outside vendors.

Atari also showed the XE Game System that will sell for $150.00. The system includes a console unit with 64K RAM, an attachable keyboard, a game pistol and joystick; *Missle Command, Blast 'Em* (a shooting game) and *Flight Simulator II* on a 256K cartridge. This new cartridge holds the equivalent of the flight simulator disk and a scenery disk. A disk drive can be added to the system so it can access the disk-based library of software for the XE/XL computers. Atari's emphasis in video games in both advertising and new hardware reflect the rebound the game market is experiencing after the crash a couple of years ago.

Watch out Texas Instruments! Here comes

Atari! A complete line of Atari brand calculators was being shown by Hartech Ltd. who has licensed the Atari name and logo. The line includes solar LCD credit card size calculators, printing calculators, desktop calculators and a 4000 character data bank calculator that can store names, phone numbers, etc. They should start showing up at retail chains, at competitive prices, this summer.

On the software front, there were quite a few new titles for the ST. One was *SCAD* by Xetec. Its a two-dimensional drafting program with many features not found in others such as the ability to rotate an object about any point on the plane in as little increments as .1 degree. You can also precisely enlarge or reduce an object in increments as small as .1%. SCAD should be available September 1st for $99.95.

Have you ever wanted to install a new background on your ST's desktop, like the Mac can? Well, *Easel/ST* takes this concept one step further by allowing you to install any *D.E.G.A.S.* picture as your desktop. This utility will sell for $19.95.

For all of you desk accessory fanatics out there, Timeworks has introduced *Partner ST*. This accessory takes up only one slot and includes, among other things, a 60,000 word thesaurus.

Broderbund was showing off *Art Director* and *Film Director* which is a paint program and an animation program, respectively. They will be packaged together and will sell for $79.95 for the set. They also said that *Print Shop* is on the way for the ST for $49.95.

An impressive sound digitizing demo was being given by Eidersoft. The software is called *Pro Sound Design* and allows you to (among other things) cut, copy, loop and play digitized sound forwards and backwards. The 8-bit digitizer connects to the ST via the centronics port.

Superbase Personal Relational Database which features the ability to incorporate pictures into the database was being showed by Precision Software. One nice application of this product would be a realtor with a database of available homes. After scanning the database, the realtor could not only see the raw data, but also an actual picture of a selected house. *Superbase* can hold an unlimited number of fields per record and up to 16 million records per file.

LDW was showing *Vegas Gambler* and *Vegas Craps* under the trademark of California Dreams. *Vegas Gambler* includes four games; a slot machine, blackjack, roulette and poker. *Vegas Craps* is billed as "an accurate simulation of the game as you know it in Las Vegas." Both of these games work in either color or monochrome.

Psygnosis, the people who brought us *Brataccus*, was showing off two new titles: *Barbarians* and *Terropods*.

For both the XE and the ST, Epyx announced *Boulder Dash Construction Set, Spy Vs. Spy III* and *Arctic Antics*. And last, but not least, Starsoft, the people responsible for *Pirates of the Barbary Coast* were distributing a 15-minute animated demo of their action/strategy game, *Aliants*. The game Aliants, is a two-disk set which will sell for $27.95.

For the XE Game System fourteen new titles will be released by Atari. It was stated that the XE Game System could also use cartridges from the XE/XL computers, but they did not state that the reverse is true, although I believe they can. Any way, among the titles to be released on cartridges are: *Ballblazer, Rescue from Fractalus, Lode Runner, Battle Zone* and *Star Raiders*. Atari was also showing *Atari Planetarium* on disk for the XE. Well, I guess that's about it for this CES. I'm going to go home now and take a well-deserved rest. Honestly though, I can't wait for the next show.

ATARI IN LONDON

Spring 1987 Update

By Milt Creighton

Last year at this time I had occasion to travel to London on business and, while I was there, I had an opportunity to check out what Atari was doing in that big town. Some of what I found was published in CURRENT NOTES last summer. This year I returned to London and, while I didn't have quite as much free time on this visit, I did have a chance to check out the Atari scene again. This article will focus on what I saw and some thoughts about how things have changed.

Last year I really didn't know what to expect from Atari in London. I had heard that the ST machines were all the rage on the continent and several German Atari fans I ran into in the London stores tended to confirm the stories. But in London, Atari had a limited presence last year and what dealers existed were hard to find unless you knew where to look. There were a couple of very professional British Atari magazines and one or two industry weeklys which covered Atari, but I could only find dealers by calling a toll-free number and getting a list of addresses. Not so, this year. This year they've been established long enough to be listed in the phone book, but there don't seem to be any more of them.

There are still a number of small dealers along Tottenham Court Road, but none of them appear to have any more inventory than last year. The Atari ST machines are still on display in the shop windows but, since all of these stores sell other computer brands as well (along with TVs, radios, calculators, watches, and music synthesizers) it seems that more display space is being given to the PC-compatible Amstrad machines.

Silica Shop, the largest of the Atari dealers in London, also has a retail location along Tottenham Court Road, although most of their sales are mail order from their warehouse in Kent. Silica Shop is still exclusively Atari and the only one of the computer specialty stores I visited to also offer the 8-bit machines as well as the ST models. Last year things were a madhouse at Silica Shop as they moved into their new quarters. Boxes were everywhere and I had to wait in line for nearly an hour just to speak to a salesman. Not this time. I was able to speak to the store manager himself without having to wait. There were customers in the store, plenty in fact. The difference was that the customers themselves were more knowledgeable this year. They knew what they wanted and didn't have to spend a lot of time asking questions.

The ST machines offered for sale in London are the 520ST-M, 520ST-FM, and the 1040ST-F. The 520ST-M looks to be the 520ST keyboard sold in this country. It has an internal RF modulator and seems to be sold without a drive or mouse. The 520ST-FM has 512K RAM, an internal power supply, a single-sided drive, an RF modulator, and comes with a mouse. The 1040ST-F looks to be almost identical to the 1040ST sold here except that there is no internal RF modulator in the UK version.

Last year I was in London just after a large Atari computer fair. There was a lot of excitement in the air, the feeling that big things were just around the corner for Atari enthusiasts. At Selfridges, a large department store with a very good computer department, there were plans to spotlight the Atari ST machines by giving them their own booth. The salesmen were very knowledgeable and very helpful, true enthusiasts.

A lot of that didn't come to pass. The ST machines are out on display and they even have a corner devoted to 8-bit hardware and software at Selfridges, but the knowledgeable and enthusiastic sales staff has departed for greener pastures. The few salesmen I spoke with who knew anything about the ST machines referred me to Silica House for any detailed questions. They even had Silica House software brochures lying on their own counters!

Still, a lot of what could be taken for public apathy compared to the enthusiasm of last year is, in reality, business as usual. Atari in the UK expects to sell 75,000 ST computers in England this year. Other distributors think that figure is conservative because they are selling ST computers as fast as they can get them. What I heard from the manager at Silica Shop in London confirmed the fact that sales were up. He told me they got a shipment of computers every week but the stock never lasted more than three days. So, in spite of the apparent lack of visible enthusiasm, Atari STs are selling at a record clip in the British Isles. In Scotland, for example, the major

dealers there have reported a 70% increase in sales since Christmas! Of course, Atari is doing well on the continent too. Atari GmbH in Germany reported sales of more than 70,000 ST computers last year. The sales of that one subsidiary reportedly accounts for nearly one third of Atari sales world wide!

Software -- last year the thing I was most interested in finding was ST software. I remember being disappointed that there wasn't more UK software available for the ST. I think I expected that since the Europeans had the ST for six month before it was introduced in the US, they would have flooded the market in London with software titles not available in the states. While there was some software on the shelves there I hadn't seen in the US, notably a pre-release version of *1ST Word Plus* and another word processor called *Boffin*, most of the software sold in London was US-produced -- and at considerably higher prices.

This year things have changed a little but most of the software available for purchase in the UK is still US-produced. There are notable exceptions. *1ST Word Plus* is now officially released in the UK and *Fleet Street Publisher* is (at least to the British mind) a more sophisticated desktop publishing program than *Publishing Partner*. There are a couple of new database releases for the ST available in the London stores, *Trimbase* appears to be a GEM-oriented hierarchical design while *Superbase* is a visually-oriented relational database. Haba systems, which appears to have almost disappeared from the US Atari market is still a force in London, has a new word processor on the way called *Signum* and a new product (hardware and software) which will receive and display signals from the Meteosat meteorological satellite.

Signum, the word processor, is an intriguing new product. It is designed to be a true what-you-see-is-what-you-get document processor. It will be capable of displaying up to seven special fonts on-screen per document and then printing them out on a dot matrix printer in graphics mode -- in true proportional spacing both on the printout and on-screen, no less! Whether this product (originally developed by a Dutch company) will ever be seen in the US market is unknown.

A lot of the UK-produced software is game-oriented and I did see some new releases from Psygnosis, the creators of *Brataccas*. They have a new game out called *Barbarian* which has the same high-quality graphics and another new game on the way called *Terrorpods*. Most, if not all, of the games I saw were of the arcade variety rather than strategy, sports, or wargame simulations. One coming feature of the UK software market is the anticipated introduction this year of a number of new games on ROM, to be inserted into the cartridge slot of the ST computers. With 128K to work with, the games will probably be of the arcade variety and they should prove to be one solution to software piracy.

Permit me to leave you with a few final observations. Atari is alive and well in London. From what I've seen in the European trade magazines, Atari is also doing well on the continent of Europe, particularly in Germany. The Trammiel's Atari does not appear to be treating the European market as a poor relation to the richer US market. In fact, it almost appears the reverse is true. A lot of new Atari products debut in Europe, not in the US. While most of that can be laid at the feet of the slow-moving FCC in the US, these new products do not appear to be marketed as trial balloons. They are marketed with the full support and encouragement of Atari Corporation.

Atari appears to be bending over backward to assure the Europeans that their support is important. While I was over there, for example, Jack Trammiel announced plans to establish a software research facility in the UK to take advantage of European programming expertise. As a result, Atari isn't regarded as an American import, shoved down the European throat with all of its US-market biases intact. Instead, Atari in the UK is marketed as being distinctly different from its US counterpart. Indeed, in some ways, it appears to me that the Atari market in Europe and the UK is more vital than it is in the US. I don't necessarily mean that Atari itself has lost its focus on the US market, though I have heard some convincing arguments to that effect lately. But a lot of the vitality in Europe and the UK is in the development of third-party hardware and sophisticated applications software. Where it seems to me that a lot of the third-party development in the US is focused on trying to get the Atari ST machines up to (or down to) the standards of the IBM PC and the MAC, a lot of the more innovative work which really explores the inherent capabilities of the Atari ST is being done in Europe right now -- and Atari Corporation just may have recognized that.

TIME TO RENEW?

Check your mailing label. If the first line has "8707" or "8708", this means your subscription ends with this issue. Be sure to get your renewal in to CN (club members send renewals to your clubs) so you don't miss out on the September issue.

NEWS FROM ATARI

To Our Shareholders:

We are pleased that our first annual message as a public company bears good news on every front. 1986 was a milestone year for Atari. We put together a successful initial public offering, paid off our acquisition indebtedness to Warner Communications, Inc., achieved significant profitability, and introduced the ATARI 1040ST - which broke the memory barrier of $1 per kilobyte.

Sales for 1986 were $258,131,000, up 82 percent over $141,987,000 in 1985. Net income was $44,516,000 or $1.89 per share, compared with a loss of $14,314,000 or $.62 per share in 1985.

A New Company. In July of 1984, we acquired certain assets and liabilities of Atari, Inc., a subsidiary of Warner Communications, Inc. Our challenge was to stop the losses and simultaneously prepare for the future. We began controlling costs by reducing overhead. At the same time, we brought with us a new 68000-based ST personal computer. In 1985, we introduced it as the ATARI 520ST and its innovative technology established the company as a prominent force in the dynamic personal computer market.

Consumer enthusiasm for the new ATARI ST computer line combined with the popularity of our video game series enabled us to pursue a successful public offering. Of the $54.2 million raised from the offering, $36.2 million was used to repay acquisition indebtedness and working capital loans. The balance of approximately $18 million was added to working capital, which at December 31, 1986 totalled approximately $96.5 million.

A Seasoned Management Team. The nucleus of Atari management has worked together in the computer and video game industries for more than a decade. Our horizontal management structure is purposefully simple, with few layers, enabling us to react quickly to market changes and opportunities. We're lean and aggressive and willing to take bold, yet thoughtful action based on our thorough understanding of technology and consumer electronics markets.

Power Without the Price. Atari is dedicated to making technologically advanced personal computers and video game systems that can be sold profitably for less than anybody else.

There's no mystery in this. We strive to keep costs down at every step in the process; and our prices reflect actual costs, plus a reasonable profit. We believe that our long-term success is dependent on providing consumers with superior value. We firmly believe in our slogan, "*Power Without the Price.*"

The 1040ST: A Computer Industry Milestone. One of the major achievements in the personal computer industry during 1986 was the successful introduction of the Atari 1040ST personal computer, which joined the ATARI 520ST as part of our flagship product line. The ATARI ST line of computers received industry acclaim. FAMILY COMPUTING noted that "With the impressive ST, Atari has delivered on its promise of power without the price." BYTE MAGAZINE referred to the ST as "...an amazing bargain, much more of a computer for the rest of us than Mac ever was," and MICROTIMES wrote: "Faster and with better graphics capabilities than IBM/AT, it could be a great vehicle for low-cost networks, desktop publishing and visual database management software."

Video Games: A Sharp Rebound. In 1986, the video game industry experienced a strong resurgence. Riding the crest of this rebound, we retained our position as a leading manufactuer of video game systems. We introduced the ATARI 7800 PROSYSTEM in 1986. Both the ATARI 2600 and 7800 video game systems sold out in 1986. We offered exciting new software for both systems, expanding what already was the largest game library in the world.

Outlook for 1987. In the year ahead, we plan to concentrate heavily on improving sales in the United States. Our focus on broader distribution and market share will be supported by increased merchandising and advertising efforts. We also intend to introduce several new, exciting products utilizing the most recent technology.

The successes we have enjoyed, as well as those we are planning for, are the result of our firm belief in our basic principles:

* We offer the latest technology at an affordable price.

* We believe in a fair profit for ourselves, our suppliers and our dealers.

* We sell to and buy from the world - we take a global view of the market.

* We believe in maintaining a horizontal management style and a lean overhead.

* We sell to the masses not the classes.

* Business is war.

We are committed to these principles and we wish to thank our customers, shareholders, employees and enthusiastic user groups throughout the world for thier continued support. The philosophy continues...

Sam Tramiel, President

Financial Highlights

(in thousands)	Year Ended Dec 31 1986	Year Ended Dec 31 1985	May 18,'84 (Incepton) to Dec 31 1984
Statement of Operations:			
Net Sales	$258,131	$141,987	$110,680
Income (loss) from operation	48,215	(25,819)	(61,455)
Net income (loss)	44,516	(14,314)	(62,758)
Balance Sheet Data:			
Working capital	96,484	11,749	13,820
Long-term debt	2,033	57,082	41,257
Shareholders equity (deficiency)	105,422	(19,477)	(6,899)

Strong First Quarter Results

SUNNYVALE, CA, May 1, 1987. Atari Corp. reported sales for the 1st quarter ended April 4, 1987 were $65,133,000, an increase of 45% over the $44,877,000 in sales for the same period last year. Income before an extraordinary item for the quarter (a tax reduction from the use of loss carryforwards) was $9,365,000, up 411% from the $1,831,000 reported for the same period in 1986. Earnings per share for the quarter before the extraordinary item were $.32 versus $.08 for the 1st quarter in 1986.

First quarter sales and profits continued to be strong. In Europe we have added new sales offices in Spain and Sweden. We plan to concentrate heavily on improving sales in the United States. To help accomplish this goal a new general manager has been hired.

During April of this year the Company completed a Euro-dollar bond issue for $75,000,000 at 5-1/4 percent. The proceeds will be used to expand the Company's business through capital expenditures or acquisitions in the computer business and related areas for general corporate purposes.

New products previously announced are on schedule with several to be shipped this summer.

New Faces at ATARI

SUNNYVALE, CA, April 6, 1987 -- Atari Corp today announced the appointment of J. J. (Jerry) Brown as vice president and general manager of U.S. operations. Prior to joining Atari, Brown was vice president, corporate marketing at Texas Instruments. Before that he was vice president of marketing and sales for TI's Data Systems Group in Austin, Texas.

Brown joined Texas Instruments after an 18-year career at IBM, where he was manager of marketing support programs for IBM's Information Systems Group in Rye Brook, N.Y.

Prior to that, he held high-level sales and marketing positions, including area manager of the General Systems Division in California; general manager of the General Systems Division in the Caribbean; marketing manager for Manufacturing and Processing Systems; and sales representative for the Data Processing Division.

He received a bachelor's degree in systems engineering from Brooklyn Polytechnic Institute and did post-graduate work in business and operations research at New York University.

SUNNYVALE, CA, May 29, 1987 -- Atari Corp has appointed Clifford Slobod director of national sales for its entertainment division.

Slobod is responsible for domestic sales of Atari's line of video game systems and software and reports to Michael Katz, executive vice president for entertainment electronics. One of his first tasks will be to manage the introduction of the new Atari XE video game system and 40 new game titles into the dealer network.

"Cliff brings to Atari an extensive background in sales management experience in the toy business," said Katz. His experience includes 13 years with Mattel, Inc. as a national account executive and a number of sales and management positions. He was also vice president of sales for Marx Aurora Products (a subsidiary of Marx) vice president, marketing and sales for Entex Industries; and executive vice president of sales for Spectra Star Kites.

"Over the past 20 years, Cliff has successfully worked with major chains such as K-Mart, Sears, F.W. Woolworth, J.C. Penny, Wards, Target, Aldens, Spiegel, Army Air Force Exchange System and the Navy Resale System," Katz noted.

New XE Game System Introduced

CHICAGO, May 30, 1987 - Atari Corp will include three popular cartridge games at no additional cost when it begins shipping the new XE video

game system in July. Games bundled with the XE game system are the top-selling hit *Flight Simulator II*, from SubLogic; the Atari classic, *Missile Command*; and *Blast 'Em*, a shooting game being specially developed for the XE.

"The XE is the ultimate game system for the serious game player," said Michael Katz. "It has more features and power than any other game system, and we're including $80 worth of free games with every system. No other game maker is offering anything close to it."

The XE game system features a console with 64 kilobytes of memory, an attachable game-playing keyboard, video gun, and a joystick. Its memory, equivalent to an 8-bit computer, is the largest in any game system. That gives it superior graphics, dramatic animation and realistic sound, and the power to run advanced computer games, Katz noted. The cartridge for the XE game system can store over 256 Kilobytes of program, which is twice as great as any other comparable system, Katz added. Atari is also selling a disk drive for players who prefer disk-based software.

The attachable keyboard and video gun make it easy to play hundreds of sophisticated games such as *Flight Simualtor II*, which requires keyboard interaction. The target gun is attached to the console to electronically "shoot" at images on a TV or monitor. The XE can play more games than any comparable system, and the library grows steadily as Atari converts disk games to cartridges, Katz said. The XE game system can play games written for the Atari XE and XL computer systems.

The XE, which complements Atari's popular 2600 and 7800 video game systems, carries a suggested retail price of around $150.

New Marketing Campaign Coming

CHICAGO, May 30, 1987 - Atari has stepped up marketing efforts for its personal computers and video game systems, according to Jerry Brown, Atari vp and general manager for US operations. "Atari intends to remain the leader in video game systems and to increase its share of the US personal computer market," Brown said. To do that, Atari has quadrupled the advertising and promotion budget for its personal computer and video game product lines. As part of its new multi-million marketing program, the company has developed seven new commmercials, introduced new in-store display units, and designed new packaging for its video game systems.

Atari has developed three new commercials for its video game systems -- two for the new XE video game system and one for the 7800 video game system, said Mike Katz. The new commercials as well as an existing commercial for the 2600 game system are scheduled to run on network television, spot television and nationally syndicated shows from September through December. In addition, Atari will produce commercials to run on top-40 radio stations around the country from September through December, Katz added. During the same period, print advertisements for the XE and 7800 video game systems will also run in comic books. This is the first time that Atari has advertised in comic books.

Atari is also offering its video game dealers new in-store display units for demonstration of hardware and software. The new display units are either self-running or playable. Atari has redesigned the packaging for its 7800 video game system and has created packaging for its new XE system. Its new packaging for the XE game system, which features full four-color graphics, has a "beauty" shot of the XE on the front panel, photos of the product in use on the sides, and visuals of screen shots on the back.

Atari has also significantly increased its advertsiing budget for the Atari ST line of personal computers, according to Jerry Brown. In its first television campaign for he popular ST line of personal computers, the company developed four commercials that are scheduled to run on network television, spot television and nationally syndicated shows during the third and fourth quarters. The commercials highlight Atari's motto of "Power Without the Price" by comparing the power, speed, memory and price of the Atari 1040ST and 520ST with comparable machines from IBM and Apple. The commercials were prepared by Messner, Vitare, Berger and Carey of New York City. New print advertisements to support the television campaign for the ST line will run in consumer and computer magazines during the third and fourth quarters, Brown noted.

Company Profile

The company's products include the XE line of 8-bit personal computers, the ST line of advanced 16/32-bit computers, the 2600 and 7800 video game systems, peripherals and accessories, and a growing library of ocomputer and video game software. These are sold in 50 countries around the world.

Atari is a multi-national company employing more than 1,400 people. Corporate headquarters including research, development and product design are located in Sunnyvale, California. Wholly-owned subsidiaries in Taiwan and Japan are responsible for worldwide manufacturing and production engineering, respectively. Wholly-owned sales subsidiaries are maintained in the Benelux, Canada, France, Italy, Spain, Sweden, Switzerland, the United Kingdom and West Germany.

DALLAS ATARIFEST 1987

Atari Does Dallas

By Pat Rox

The Dallas AtariFest was held Friday and Saturday, May 8 and 9. Co-sponsored by the Dallas Atari Computer Enthusiasts (DAL-ACE) and the North Texas ST Users (NTSTU), the two day event was held at the Infomart in Dallas.

Neil Harris Comments

The opening and closing addresses of the Fest were given by representatives of Atari. In his closing address Neil Harris, Director of Marketing Communications at Atari, gave an insider's view of the goings on at Atari, past and present. He painted the picture of Atari, Inc. as a lean, hard working, aggressive company with dedicated people working long hours for a cause they believe in. According to Neil, Jack Tramiel has spent three weeks out of each month of the last year in Europe. There he has helped to make Atari the best-selling computer in Germany and at or near the best-selling computer in France and England.

Despite industry analysts declaration of the death of the home video game machine, 1986 was a banner year for Atari game machines. As a result of brisk Christmas sales, retailers around the world sold out of the 2600 VCS and the 7800 Pro System. Atari had problems getting retailers to stock the 65XE computers. So, they repackaged it as the XE Game System complete with console, keyboard, joysticks and gun (a picture of this system was included in the Atari 1986 Annual Report). Now, according to Harris, "everyone" wants it. There were those in attendance who said that Atari will never shed the "game machine" image as long as it sells game machines. When a product (with virtually no research and development expense) provides substantial income, does the intelligent entrepreneur walk away from it? Of course not, especially when this money can be spent on R&D, production, sales, advertising, etc. of other "more serious" products.

A continuing commitment to the 8-bit computers was reiterated. Atari is actively seeking and working with third party software firms as well as on their own (e.g., XEP 80, AtariWriter+ for 80 columns, an announced "gun" input device and a new 5 1/4" floppy disk drive -- see details below) to bring new 8-bit products to market. *[On this subject, let's not be foolish. Never mind the legal question, pirating software is killing the 8-bit Atari software suppliers. Just a brief ("high access") look around some of your local BBS's will likely uncover a wide selection of 8-bit copyrighted programs. Don't be surprised to find a similar assortment of 16-bit programs. Let's clean up our act before the curtain comes down for good.]*

A major advertising campaign is planned for the United States in the near future. One might assume that this will coincide with the U.S. release of the Mega ST and the laser printer. It has not yet been determined if this will be a television, newspaper and/or magazine campaign.

Neil touched on expected release dates for promised products. An individual made mention of Sam Tramiel's statement (in the early days of Atari, Inc.) that no new products would be announced prior to being ready for release. Neil was asked if this policy has changed. Noting that so many of the questions he was being asked were about new products and their release dates, Neil well could have said "what are we to do, except give our best projected date...?"

Latest Release Estimates

The following release dates were given at the Dallas AtariFest and either confirmed or corrected by Sandi Austin of Atari on June 10, 1987:

XEP 80. This long-awaited product is literally on the boat headed for the U.S. as I write this. With arrival expected any day, it should be on store shelves by late June. Price -- $79.95.

MEGA ST. Some (the exact number is unknown) are on the boat with the XEP 80. These machines WILL have the blitter chip already installed. Which retail outlets will get the first units is not known. Official estimated release date remains mid to late summer. Price -- Not Set.

LASER PRINTER. Estimated release date is late summer. A picture, albeit a small picture, of the Atari Laser Printer was in the Atari 1986 Annual Report. The desktop program for this printer was unknown to Sandi Austin. Price -- Not Set.

ATARI PC. Estimated release date is end of summer. Price -- Not Set.

IBM EMULATOR. In development. Not an officially announced Atari product, no promise of release. Atari is well aware of the great interest in this product and seems to be keeping abreast of third parties working in this area. Sandi Austin told me of the IBM emulator being worked on by Avant Guard in Florida which seems to hold the most promise.

ENHANCED ST. According to Sandi Austin, there is no such product at Atari. Perhaps this rumored high-resolution marvel is the 32-bit machine.

32-BIT MACHINE (TT). In development, no projected release date.

1200 BAUD MODEM. Release date unknown.

- AMY SOUND CHIP. According to Neil Harris, Atari has a third party working on this. If they are able to make it work, they will be allowed to use the chip in their non-computer products and Atari will use it in their computers. Neil said that the chip is extremely impressive (when it works), but is not yet, and may never be, a marketable commodity.

BLITTER CHIP UPGRADES. Estimated release date is late summer.

XE GAME SYSTEM. Sandi did not know the estimated release date. Price -- Not Set.

CD ROM. For those of you who remember talk (in the early days of Atari, Inc.) of a CD ROM peripheral for the ST and still dream of having such a device, I have bad news. The word from Sandi is that this is not an officially announced Atari product. Although it is in development, there is no estimated release date, no promise it will be released.

5 1/4" FLOPPY DISK DRIVE. At the Dallas AtariFest Neil Harris spoke of a new, improved 5 1/4" floppy disk drive for the 8-bit computers. It is supposed to read all previous official Atari OS's, be three times faster than the 1050 and about the same size. The estimated release date is unknown. The price has not been set, but will be about $250.00. Neil said that with the release of this disk drive there will be no 3 1/2" floppy from Atari for the 8-bits.

As reported in last month's issue of CURRENT NOTES, Atari has given their okay to Darek Mihocka for release of his 8-bit emulator for the ST into the public domain with the stipulation that he must release the source code. Atari's intention never was to keep this program out of the user's hands. However, since the current version is pretty rough, Atari wanted to be sure that the source code was released. Atari is hoping improved versions of the emulator will be forth coming. The source code will appear in ST-LOG, possibly the August 1987 issue.

All in all, Neil Harris ducked no questions and gave us a unique opportunity to "see" inside Atari.

FESTivities

As for the Fest itself, there were many seminars held. Included among these were seminars on desktop publishing, rational data bases, development tools, languages, graphics and multitasking/multiusers on the ST. Additionally, attendees were greeted by a good assortment of exhibitors: Michtron, Broderbund, SubLogic, Astra Systems, Mirrorsoft, Genie, Hybrid Arts, Beckemeyer Development Tools, Antic and Analog.

Astra Systems was showing the SYSTEM HD+, a 20.8 megabyte hard drive neatly contained in the same housing with a double-sided 3." floppy drive. A Dallas retailer with a booth at the Fest was selling the HD+ for $850. Mirrorsoft (of London England) demonstrated their Fleet Street Publisher which, at $149.00, seemed to work quite adequately with a 520ST and one floppy drive. Beckmeyer Development Tools of Oakland, CA, was showing their multitasking operating system for the ST, Micro RTX.

WORD PERFECT, a new name in Atari software, presented WORD PERFECT for the ST. With macros, merge, footnotes/endnotes, spell checker, thesaurus and more WORD PERFECT is a welcome addition to the growing number of "serious" programs for the ST. For a suggested retail price of $395.00, we now have available a powerful, professional word processor. The Atari version is file compatible with WORD PREFECT 4.1 for the IBM PC and other computers.

HYBRID ARTS conducted what has become their customary MIDI-MAZE tournament. In the competition seveal individuals compete head-to-head with each other simultaneously through the use of separate STs. The top scorers at the Fest competed Saturday afternoon to determine the winner of a Casio synthesizer.

To me, perhaps the most interesting new product at the Fest was the IMG SCAN demonstrated by SOFT-LOGIC/SEYMOR-RADIX. Connected to the ST through the cartridge slot with wires connected to the printer head, IMG SCAN turns your graphic printer into a high rez image scanner. It has 256 gray levels, is fully color assignable and is Neo and Degas compatible. This is an exciting product with readily apparent applications in the area of desktop publishing. Priced at $99.95, the IMG SCAN was offered at the Fest for $59.95.

The sponsoring user groups both had booths where

new members were welcomed and at which copies of the groups' public domain disk libraries could be purchased. Retailers, both local and from as far away as Houston, were at the Fest. One could purchase the MAGIC SAC (with or without MacIntosh ROMs), 8 and 16-bit software, disks, computer covers, modems, touch tablets, memory upgrades, complete or partial ST systems,...just about everything currently available for Atari computers could be found. BEST ELECTRONICS (of San Jose, California) had a very good supply of Atari replacement parts and service manuals (from the original 400 to the 1040ST). They also had souvenir items from the days of Warner Communications -- ash trays, brief cases, sweat shirts and more, all emblazoned with the familiar Atari logo. This is not a complete list of the exhibitors, but these listed should give one a pretty good indication of what was available at the Fest.

ATARI'S presence was not insignificant. The familiar striped Atari tent covered the largest booth at the Fest. Beneath the canvas were at least 15 XEs and STs (mostly STs) running a variety of software from *JOUST* to *CRYSTAL CASTLES* to *STAR RAIDERS II* to *ATARI PLANETARIUM* as well as some third party software. Neither the Mega ST nor the Atari PC were in Dallas. Understandably, they were in Hanover at the CEBIT fair (supposedly the world's largest show in bureau and information electronics). The XEP 80 was demonstrated on an XE. Producing very crisp letters on an Atari SM 1224 monitor, the wait for this product will be worthwhile. A standard ST (blitterless) was positioned next to an ST with the blitter chip installed. Both machines were running a repeating scene of birds flying across the screen. The blittered ST's picture was much smoother and life-like (another product worth the wait).

Atari brought along T-shirts, posters, and mobiles (from the days of Warner Communications) which were freely given to attendees. Atari personnel (Sandy Austin, Neil Harris and others) were present throughout the two day event to answer questions, give advise or just chat. Door prizes (8 and 16-bit software) were awarded on the hour and the grand prize (a complete 520ST system) was supplied by Atari.

All-in-all I was very impressed with Atari's commitment to the Dallas AtariFest. The above mentioned support combined with the guaranteed no out-of-pocket expenses to the local user groups tells me that what Atari says ("Support of user groups is one of our major priorities") is what Atari MEANS.

ST UPDATE

Latest News from the World of ST

By Wm. Price and Frank Sommers

Back Seat Drivers For The ST

Versatility and Third Parties -- In their 15 June issue INFO WORLD printed the statement that the Atari ST is "about the most versatile machine on the market". What caused that statement to be made? Was there an unveiling at CES or Comdex by Atari of a new machine? Did they announce something from their headquarters, normally so sealed off from leaks it makes the White House look like an Arab bazaar? None of the above. A third party, Avant-Garde Systems, on their own, with an assist in marketing advice from other third party producers of soft and hardware for the ST, displayed *PC-ditto*, their IBM software emulator for the ST. We talked about its virtues in the May issue. We were impressed, and apparently we weren't the only ones. The story, an intriguing one with possible major ramifications for the ST, goes like this.

Comdex, Atlanta, GA -- The Atari PC is acknowledged by most to be/have been Atari's attempt to broaden the perception of the Atari machines, and help them winnow their way into the big pond. But curiously, it may not be hardware that does it. At Comdex, in early June, a BYTE reporter stopped off at the Avant-Garde booth to toy with their *PC-ditto*. The next day he was back with several computer columnists, including Jerry Pournelle of BYTE and INFO WORLD fame. They went through the available IBM software, bringing it up faithfully on the ST monitor. Then Pournelle, pleased but not convinced, went off to other IBM software booths. (Description has it that when he enters a booth, he creates an instant flurry of attention and action.) Soon he was back at Avant-Garde with several programs, some communications software, etc., and a handful of the heads of the software booths. A more intense trial by fire was laid down. Result?

Pournelle wrote in INFO WORLD, "The most amazing thing I saw at Comdex was from Avant-Garde Systems (381 Pablo Point Drive, Jacksonville, FL 3225 904/221-2904) .... It turns your Atari ST (520 or 1040) into a complete PC compatible. The emulation is good right down to the chip level, and there's darned little software it won't run. It claims everything form Lotus and Norton Utilities to Turbo Prolog, and I believe it. There's even a way to set up a 5 1/4-inch disk as the A drive so you can run copy-protected programs, assuming you're silly enough to want to run copy-protected software. The thing will boot DOS from a hard disk, imitate both monochrome and CGA and run both serial and parallel ports .... Dave Small's *Magic Sack* lets you run Macintosh programs, and now *PC-ditto* practically turns the ST in a PC -- MAKING THE ATARI ST ABOUT THE MOST VERSATILE MACHINE ON THE MARKET". [Editor's caps]

Marketing Cooperative -- An equally remarkable thing about this product, that performs as the company stated it would, is that it shipped within 30-days of being announced. Bill Teal, co-president of Avant-Garde, along with his wife, Ginny, reports on a group of software and hardware producers that manufacture business products for the ST, like *PC-ditto*, who are forming a sort of ST co-op, designed to help each other promote their ST business products. They have received little if any expression of interest from Atari in what they are doing. They believe, for whatever reasons, that to date Atari has not succeeded in insuring the availability of high-grade business software for the ST. One of their goals is to have people understand that a machine that is recognized as more powerful than an IBM AT can, by the way, run top-quality business programs. Apparently Compaq, in an effort to protect its market as the emerging IBM PS/2's overshadow and begin to erase the image of the original IBM machines, is engaging in a parallel effort to establish existing IBM compatible machine as the work tools of the business world. As a footnote on *PC-ditto*, user groups, with orders of ten or more, can receive discounts on the program from Avant-Garde.

Stimulus for Sales? -- Does Atari in fact need a push from the Third Partites? Sales in Europe in London and England were up over 40% in the 1st quarter of this year. So what's the problem? Sales for the 2nd quarter in the U.S. dropped more than 40%. Dealers on both coasts and in the heartland, in fact, would have been happy if sales had only dropped 40%. Atari has been firing distributors who haven't been able load up the dealers with machines. CSS, distributor for Atari for the lake states, Wisconsin, Illinois, Indiana and Michigan had a problem in May. They sold 18 machines to dealers in those four states. They were dropped by Atari and somebody else is trying to convince dealers they need more Atari boxes in their stores. Other distributors have been released for the same reason. So Atari needs all the stimulus it can get, and third-party products may be part of the answer.

Magazines -- Word has it that messages have been seen on both Compuserve and Geni about the possible demise of ANALOG. ANALOG has been asked about this and denials were loud and clear, and no-wayish! ST USER INTERNATIONAL is appearing on more newsstands here. Technically, it is high-quality stuff indeed with sharp color, high gloss, and professional layouts. The articles are of similar quality with a European flavor. But the bucks needed to launch a new issue for a magazine (ST USER appears in England as ST WORLD, its new name) are significant and it's always a gamble. We wish both of these magazines all future success.

Unix Aporting -- Just the thought of watching a UNIX operating system humming along on a 520 ST or a 1040 makes those of us who started with 8K and DOS 2.0S in the Atari 800 beam, and I mean beam. A booth at Comdex was porting UNIX to the ST's which were running it in real time.

Software, Hardware

The Mega, The Blitter, & The Laser -- Like Winkum, Blinkum, and Nod, these three have been adrift for a frustratingly long time. Triangulating where they are at present and when they will strike land and the dealers is more difficult than getting a fix on the Soviet naval test basin outside Leningrad. If you start with the reasonable statement that they were FCC approved about in early June, then other factors, delaying shipment, come into the play.

The blitter. Two reports exist. One, that the first Mega ST's won't have the blitter. The explanations for this range from there are only five in captivity with a blitter that hasn't "blown up the machine" to the first 200 Mega ST's have been shipped to Germany for developers.

Then the triangle expands to the laser and will they wait to ship the Mega until the laser printer is ready and vice versa. The debate about the laser's date of appearance in dealer inventories complicates itself with reports that Len Tramiel, who was showing the laser in his hotel suite only at CES, who is/was a bitter opponent of putting PostScript (PS) in the laser as its page description language, has been talking with the heads of companies knowledgeable about this topic. Some, like the authors of *Publishing Partner*, Soft Logic, have only discussed questions ancillary to the PS issue with him; others have been asked if it's worth it from Atari's standpoint. The worth in this instance is the 7% of sales, plus the "up front $$$", $150-175,000. So it is no easy decision. Come out with a machine without PS, and have it fail, since PS is almost the standard page description language for laser printers that wish to be more than high quality daisy wheels. Pay the money and hope that volume will permit you to recover your initial fee as well as make a serious profit. Those of you with calculators as desktop accessories can figure how many printers Atari would have to sell to do that. Guessing is that Len Tramiel, who had spread the word that he would make a significant announcement at Atari World's Expo in San Jose near the end of last month, might come out and announce his decision then, i.e. that they are including PS in the laser or that they are shipping it without memory and with GDOS and *Easy Draw* as previously reported. Atari Customer Service, for its part, announces that the laser will be shipped in August. This coincides with Neil Harris' announcement at the DustBin Atarifest in Nevada. (Incidentally, we suggested you watch Seattle and Dallas fairs to see if Atari would keep up its support of user groups. The article elsewhere about their strong support of the Dallas fair and presence in Seattle answers that question.)

So where are we? Demo versions and dealer-only models of the Mega ST 2 will appear in late July. As we said last month, so we humbly submit again, September/October for the desktop publishing units to appear as a package. Finally, if the decision is to go with PS, we all should be prepared to wait longer, for what will be an infinitely better machine. However, either way, those of you with hard drives be prepared to plug the laser into your hard drive port and then your hard drive into a port on the laser. Space and distance problems?

A Better Laser? -- Like the Gutenberg press, DTP (desktop publishing) has captured the fancy of all would-be activists in the world of literati. To be able to have your own print shop turning out dazzling copy, postures, handbills, ad sheets for summer jobs, local club newsletters, classy award notices, revolutionary brochures, underground hand bills -- the idea may be more powerful than the machines for some time to come. Star Micronics bets not. At Comdex they showed their competitor to Atari's laser printer. Guess what? Yes, it is equipped with PS, and has one meg of memory and uses both serial and parallel ports. It will be out in August and the initial price is set at $2,499, but that can be expected to come down by several hundred dollars. The question is, Will one meg of memory do it? PS takes 900K just to get up and on the dance floor. That wouldn't seem to leave enough for much DTP'ing.

WP Fans, Patience -- For those of you who refuse to process your next word until *Word Perfect* arrives, the paper could remain blank until Labor Day. We hoped last month that if everything went well with the documentation, you would have this reputedly ultimate WP (so far none have been the final one) in memory by the

end of July. Even though the company has their own graphics/art department, the documentation has had to wait its turn. Jeff Wilson, the ST manager for *Word Perfect*, says by the end of August, and certainly September. Reports that *Word Perfect* was shown at Comdex, but only for the Amiga, were correct. Amiga invited the company to display at their booth. But Atari had no booth there.

Top Copy Gun -- *ProCopy*, the top gun in the ST copy program world, had issued version 1.40 which had problems with certain drives. As a result, Proco Products is issuing a corrected version, 1.41. Registered owners may send either a blank disk or $1.50 to Proco Products, P.O. Box 665, Chepachet, R.I. 02814, and they will send you the new version. N.B. If you are not having trouble, it means your drive is compatible with 1.40, don't send for version 1.41. It has no new features, merely corrects the drive incompatibility problem.

EST -- Ever hear of that? No, its not a self-improvement course given in California, but long long ago it was known to be an Enhanced ST, though this was denied by some at Atari, indeed, is still denied. However, it still lives. In fact, when you read this Len Tramiel may have announced that it will be out by Xmas, be a 16-bit graphics dedicated machine with monochrome screen resolution of 1280 x 960 and a color resolution of 640 x 480 with 4096 colors.

The New TOS -- The Mega's will have the new TOS. Details of interest to programers will appear at a later date. How will it help the non-programmer? Primarily, it will accelerate screen activity. Your menus will appear faster, your scrolling will be faster. Those of you with Atari hard drives will be able to auto boot them as Supra drive owners can do now. The bug that causes a crash after your machine has opened, or surveyed more than 44 folders has not been eliminated. Probably because a software fix is already on the BBS, so why jam the ROM.

Future Hardware

What We Always Wanted... -- At least four PostScript interpreter clones are under production -- as suggested in the June CURRENT NOTES, i.e. when a leading product is overpriced it begs to be cloned. In the running are Conographic, Phoenix, Control-C, and Barry & Associates. However, the initial products will be IBM/clone plug boards for IBM and compatible computers. Cloned on the same boards will be Imagen's *Document Description Language* (DDL) (Hewlett Packard's mainstay), and Xerox's *InterPress*. Drivers for Cannon, Ricoh, Xerox and other laser printer engines are supported and a bit-slice processor on one version can drive printers at rated speeds of up to 25 pages per minute. Prices? Not cheap -- $2000! A universal *PostScript Companion* at $500 - $800 is still needed.

The Happy Answer -- How about a floppy interface for the ST that will format and operate 3.5", 5.25", and 8" drives in native Mac, IBM, and other formats as well as perform the usual good job of back-up. Happy will introduce just such a drive. Such an interface, now that the ST has both Mac and IBM emulations for the ST, should open up some wild possibilities.

Hard Drive Door Opens Wider -- *Parameters-R-Us* and *Skeleton Key* both remove copy protection schemes from software. Each is designed for specific software titles with updates to follow as new software is released. You can now load your hard disk with these unprotected systems. Voila!

Third Party Drives and a New Case -- Diverse Data is offering single and dual-packaged double sided drives. Mechanisms are from Mitsubishi and are better quality than the Chinons which will not write to tracks 81 and 82. Thus the reason for the drive incompatibility with version 1.40 of *ProCopy* when using the F5 function with Chinon drives. Diverse Data provides a solution with their drive.

Coming soon will be a Mega ST case for your 520. Remove the 520's mother board and install it in the new thin-line box. What does it do for you? Moves all the serial, parallel, DMA, disk drive, and monitor connections to the box to unclutter your keyboard. Also gives ample room for 4-meg boards, the Blitter, and other add-ons. DeLuxe version has built in fan, power supply, and set of AC power switches on the front panel like a power master control box -- spike, surge, and noise protection, et al. The hitch! You must also buy a new slim-line keyboard with single telephone-type cord connection. Another heads-up product if the price is right.

Even more interesting is their new 3.5" floppy drive with double-sided capacity of two megabytes. Beckmeyer is providing the format and utility software. Today, its humming along at 1.4-megabytes. Look for the finished product by summer's end.

C-Systems also is offering single and dual double-sided drives for the ST. The mechanism is NEC and supposedly super quiet and handles up to 84 tracks. Chinons can only give coarse coffee grind. Hopefully these new drives will produce a fine Espresso. The calming of Chinon-induced nerves from a super quiet drive may be worth the price of admission.

Giant Monitors -- Looking for a composite monitor and/or a VCR output from the ST? Several approaches are underway, but stay away from passive cables that work off RF output. The quality is a bit like viewing the world through a Kleenex. An active device that produces composite from the original RGB source is needed. Its coming from Practical Solutions -- makers of Monitor Master, a useful switch box that toggles between color and monochrome monitors. The composite board produces superb color saturation on a large 25" TV monitor. Sharpness on a high quality monitor is close to that of ST's color monitor. But the ST's 70 Hz output signal has given some synch problems that are mostly cured. Now working on slight chroma bleeding problems. Look for release in August/September. The prospect of generating screens, documentation and what-have-you from you ST to your VCR for demonstration, teaching, lecturing, etc. puts your ST into a rather new world.

The Presidential Model -- Finally, while you're waiting for OS/2 so you can run your PS/2, you can relax with the announcement that IBM will introduce yet another highly personal computer. By the time the Iranamuk hearings have ended, stores will be carrying the IBM PM (Presidential Model). Insiders say it apparently has half a colon and curiously, no memory.

EMULATORS FOR THE ST

How Fast Are They?

By Dave Small, (c) 1987

It's an easy prediction: the next big wave of ST software will come from emulators. (An "emulator", by the way, is a product that makes the ST work like another machine, such as the IBM, a Z80 machine, or the Mac.)

Why "the next big wave"? Because one emulator gives you access to thousands of software packages written for the emulated machines. For instance, if I bring up an IBM emulator, there is a great deal of IBM software I can now use.

There are several breeds of emulators: let's talk about them.

First are same-processor emulators. These aren't really emulators, they are new operating systems for the same old hardware. A typical example is the *Magic Sac*; it makes the Atari into a Mac. I won't mention it further, as it's mine. Or *UNIX* for the ST, which is attempting to let ST users tap into a vast library of UNIX software. Dave Beckemeyer is working on this; these all run at Atari speed, 8 mhz.

Next are different processor emulators, written in software. What's the problem? Other machines use different processors than the ST's 68000, and the programs we want to run aren't written in 68000 machine language. So these emulators are complex programs that take "machine code", the ultimate, gut-level code for a processor, and execute it as though it were a different processor. For instance, an IBM emulator must execute 8088 instruction machine code. This involves multiple steps per opcode, and as we'll see, has big speed problems.

Finally, there's hardware emulators. These include the physical processor chip. For instance, Atari's hardware box that emulates a PC is a hardware emulator -- it's got an 8088 processor chip inside it. Generally, these take advantage of only the Atari's keyboard, display, and disk drive, and make the ST into a kind of terminal to another computer. These run at whatever speed the hardware runs at, which is generally quite fast -- 4.77 Mhz or 8 Mhz for a PC, for instance.

So we have same-processor, different processor in software, and different processor in hardware. What's the current state of these emulators for the ST?

Right now, the same-processor emulators are doing the best. Dave Beckemeyer is furiously trying to get *UNIX* onto the ST, and at least has his shell running. His *Micro RIX* is still gallantly moving along. And I promised I wouldn't mention the *Magic Sac* again.

In software emulation, there's Atari's *CP/M emulator*, which emulates an 8080. There's a more or less public domain *6502 emulator* that Atari is considering; I've seen it run Atari, Apple, and (sigh) VIC20 software, which are all 6502 based. In the 8088 field, there's one IBM emulator, *MS-EM*, that's received pretty poor reviews, and a brand new one, *pc-ditto*, from Avant-Garde in Jacksonville, Florida, that Jerry Pournelle just called up and said really good things about. It's supposed to do chip-level emulation, which means it ought to be pretty compatible.

All software emulators are ghastly slow. An explanation of why this is follows in a bit.

Finally, in hardware emulation of a different processor, there's zilch. Internal politics in Atari Corp. have sidetracked the much-awaited PC emulator; some at Atari top management fear emulators greatly, feeling that they will cripple native ST software development. Heck, if everybody can buy *Lotus 1-2-3*, written in 8088 machine language, and use it on the ST, who will write a spreadsheet for the Atari itself?, they say. I find that logic flawed, but I don't make the decisions at Atari. I do know of Atari's 8088 box and another 80286 box coming from Arizona, still in-the-works. They'll run pretty quickly if they ever materialize out of the vapor.

The "same processor" stuff is relatively straightforward -- you substitute a foreign operating system for the ST's. The ST runs the new OS at 8 Mhz. The hardware stuff makes the ST into a terminal for (usually) an IBM box, running at (usually) 4.77 Mhz or 8 Mhz. From a user point of view, this is pretty quick -- you'll get snappy response.

The software emulation is the most interesting to me. Since I've written a CP/M (8080 processor) emulator for the 68000, I thought I could share a few insights into them. The comments here cover the *6502 emulator*, Atari's own *CP/M emulator*, *MS-EM*, and *pc-ditto*, the new IBM emulator just mentioned.

What we're talking about here is taking the bits and bytes of machine code written for another processor, and running them on the 68000 as though the 68000 were another processor, say, the 8088 in the IBM PC. So, you simulate the 8088, complete with its internal registers, addressing modes, and whatnot, with 68000 instructions.

You then wade through the program to be emulated just like an 8088 would, jumping like an 8088, moving data around, and so forth. If you do it absolutely perfectly, you've emulated an 8088. When you do emulation of opcodes, your program looks something like this:

1) "Fetch" an opcode from the program counter -- this means, get the next instruction to do.
2) Somehow look up that opcode in a table, and find out what you need to do to emulate it.
3) Jump to the emulating code.
4) Do the emulation.
5) Increment the program counter and proceed.
6) Jump back from the emulating code to the "fetch" loop.

The problem is, all those 68000 instructions mean lots of time. Each jump, lookup, and whatnot take many cycles. By contrast, when you're running on a native processor (for instance, 8080 running 8080 code), this process looks like this:

1) Execute the instruction.

Lots of people who booted up *MS-EM* wondered why it was so slow. Go look at those six steps to emulate and you'll see why; EVERY time you execute one 8088 instruction, the 68000 trundles through all those steps. The overhead just kills the speed.

Let's look at a small implementation to get an example. In the 68000, let's make register A5 be the program counter. Now the 68000 happens to be blessed with automatic increment, which makes this process a little easier. Still, it looks like this:

```
LOOP:
   MOVE.B   (A5)+,D0        * fetch opcode byte
                            * into D0 & incr PC
   LEA      (TABLE,D0),A1   * point to emulator
                            * routine
   JMP      (A1)            * go to emulator
```

then, there's:

```
  ONEINSTRUCTION:
     .
     .
  (emulator code for one particular opcode)
     .
     .
  JMP      LOOP            * do another opcode.
```

Going cycle counting on an 8 mhz Atari, we can see that it will take us a long time to wade through all this opcode lookup stuff, which we do for every 8088 instruction. In fact, if we emulate a NOP instruction -- the best possible case, because all we have to do for a NOP is ignore it -- we still execute at an equivalent 1 mhz (million instructions per second).

A slow, bare-bones IBM executes at five times that speed.

As I mentioned, I wrote an 8080 emulator in 68000 assembly. I fine-tuned it in a big way. If you're curious, the above fetch loop looks like this, the best I could do:

```
  MOVE.B   (A5)+,JMPPLACE * where JMPPLACE=middle
                          * of JMP opcode on next
                          * line
  JMP      LOC            * the modified JMP
```

and the return was

```
  JMP      (A2)
```

All these are the most efficient way I could think to do things, and I spent two months searching for ways to improve it.

The emulator still ran like a slug. I benchmarked it to be the equivalent of a 0.455 megahertz 8080 machine -- about 1/4 of the speed Atari claims for its CP/M emulator. If their emulator is any faster than mine, I'll retire -- this "emulates a 2mhz Z80" stuff Atari pushes is provably wrong. Under 1 mhz easily.

Hence, in summary, we are talking machine ability of under 1 mhz. Most CP/M machines run at 4 Mhz. The IBM runs at 4.77 Mhz. The Atari runs at 8 Mhz. The Mac II runs at 16 Mhz.

And now you know why software emulators are so slow. It is not fixable; you must emulate the program counter, increment it, fetch from it, jmp to the emulator, emulate the opcode, and jmp back to the loop.

Yet, oddly, some emulators are usable, despite the slowness. This is done by sleight of hand, really, for while the machine is running incredibly slowly, the I/O is blazingly fast. Hence the illusion of speed. Why?

For instance, let's say MS-DOS, running under 8088, decides to print a line to the screen. It does this by calling the "BIOS". When we get into the BIOS, we can stop executing 8088 instructions, and switch to 68000, for MS-DOS's design makes the BIOS a "black box" that the program never looks at. At that point, we can take over, and with 68000 instructions write the line out, in nothing flat. Then, we return to

8088 mode, and slow down. So I/O appears to be normal ST speed. Only when you return to 8088 mode do things slow down.

Hence the effect is an illusion. The I/O really zips out there, but the program executing underneath is quite slow. So if you ask the computer to do something involving I/O, like displaying a file to the screen, it'll do it very quickly. But if you ask it do something that involves a lot of CPU, like recalculate a spreadsheet, it'll work very slowly.

One emulator maker didn't even optimize I/O — *MS-EM*. You can tell the MS-EM folks didn't use the 68000 for output -- that's why the letters seem to be plotted painfully slowly on the screen, one - at - a - time. At least Atari optimized this in the *CP/M emulator*.

All that we manage to prove with emulators is that most computing is not slowed by the CPU; the CPU sits nearly its whole life waiting for other things, primarily the keyboard, secondly the printer and disk. It doesn't matter if you poll the keyboard 4.77 million times per second or only half a million, really.

So, next time you read of an IBM software emulator "that runs at half the speed of the IBM" (about 2.35 Mhz), tell yourself to forget it. Ain't possible. If you see a CP/M emulator "that runs at 2 Mhz", tell yourself no way. They're lucky if they get over 1Mhz.

Finally, one interesting but very difficult possibility is to "compile" 8088 programs into 68000. We read in an 8088 program, and output the 68000 that would emulate the 8088 opcodes. Then, when we ran the resulting 68000 program, we would not have to do the fetch-lookup-jump process mentioned above; we'd be executing 68000 directly. It still would not be blazingly fast, but it would be far ahead of current emulator technology.

Unfortunately, technical problems keep this approach from being used. It's hard to tell what's data and what's program from a processor or disassembler point of view. The *source code* to an 8088 program could be translated, and probably run well, but translating the physical bits and bytes is tricky, because you don't know what the programmer is up to -- and second guessing a hacker is already hazardous.

In summary: there's three sorts of emulators. One turns off the ST's operating system and turns on another; these run nicely. Another plugs a different processor into the ST, and uses the ST as a terminal. These run nicely. The third emulates a processor in software. These run slowly.

RECENT ST RELEASES

By Andy Nicola

Recently released ST software is the topic of this column. No "Vaporware". No press releases. Only 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 (No. 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...

EditST

EditST is a GEM-based text editor designed for programming on the ST. Some features include: complete GEM support for windows, mouse, functions keys, multiple windows and moving text between windows. Block editing features; copy, move, insert and delete. Supports Find and Replace, forwards and backwards, with or without query. Auto-Indent for structured programming. DOS directory, rename, and delete file menu options. Allows 40 screen lines in monochrome or 25 lines in color system modes. The program is installable as a GEM application to allow one-step file loads. Insight Systems ($24.95)

Fleet Street Publisher

Fleet Street Publisher is an advanced desktop publishing and page layout system for the Atari ST comprised of three disks: a program disk, a fonts disk and a clip art disk. A page-based program, it allows working on more than one page depending on system memory configuration. Five defaults page sizes include A4, B5, US Letter, US Legal, and tabloid. Six proportionally spaced fonts are included, each with a range of sizes from 10 point to 30 point (with the exception of Midieval which starts at 22 point). Other sizes range from 4 point to 216 point which are scaled versions of the existing ones.

The program will load most any picture file format including *DEGAS ELITE* and those produced with the Hippo Digitizer. The program currently supports only 9-pin graphic printers.

Text may be entered directly on the page or imported from ASCII textfiles. The program supports hyphenation, kerning, justification and proportional spacing, automatic word wrap, search and replace, multiple tabulation and indentation, variable line leading, and the international character set (greater than 127 ASCII).

Page make-up features include: full page composition with multiple columns, text editing in page make-up, picture sizing and croping, linked text blocks, picture blocks with rotating in single degree steps, user-defined page size, variable-sized text blocks anywhere on the page, user-defined Function Keys which can hold text attributes, and pre-formatted text for headers and footers. Spectrum HoloByte (Mirrorsoft, Ltd.) ($149.95)

GFA Vector

GFA Vector is a supplementary module for *GFA BASIC* (required) which introduces three dimensional graphics easily into one's own programs. Pictures are written entirely in machine language which allows for fast updating of the screen and the creation of real-time animations. The 3-D editor allows object creation, viewing from three sides, and easy modification with the cursor. Objects may be rotated on any of the three axes in increments as small as one degree while permitting any rotation order. A concise yet complete tutorial is included. MichTron, Inc. (GFA Systemtechnik) ($49.95)

MasterPlan

MasterPlan is a totally GEM-oriented financial spreadsheet. Some special ST featues include: mouse or keyboard operation, sparse matrix for conserving memory, supports hard drives and printers supported by GEM, works with color or monochrome systems, utilizes ultra-fast floating point math rourines, supports multiple windows for viewing graphs and worskeets simultaneously. The program allows importing files fom *VIP* or *Lotus 1-2-3*. Spreadsheet size is 8192 x 256. Functions include: Date, Financial, Logical, Mathematical, Special and Statistictal Functions. Multiple graphs may be created and stored and save files can be compatible with *Degas* or *Publishing Partner*. ISD Marketing ($149.95)

News Station ST

News Station ST is a conversion from the 8-bit of an entry-level page layout and design program. The program supports *Degas*, *Neochrome*, and *Printmaster* file formats and permits the importing of ASCII textfiles. Supports any graphics printer (you create your own driver). A clipboard allows cut and paste, freehand drawings can be made with the mouse, and utilizes

differents types and sizes of fonts. Reeve Software ($34.95)

Partner Fonts Disk No. 1

Partner Fonts Disk No. 1 is the first commercial font disk offering from the makers of *Publishing Partner* (required). The four fonts included are DEVOLL, SPOKANE, THAMES, and an improved HELVETICA. The disk also includes the usual and necessary complement of printer drivers. Both color and monochrome system configurations are supported. SoftLogik, Inc. ($29.95)

ST Wars

The makers of *Harrier Strike Mission* now bring us *ST Wars*, a fast-paced space battle simulation with 3-D graphics and digitized sound. Your mission is to destroy the Tyranny before they deinfestate the planet where the last survivors of your brother-in-arms have escaped. You must blast your way through ten successively increasing deadly sequences. Miles Computing, Inc. ($39.95)

STuff

STuff is a comprehensive package of 21 different utilities and accessories. Included are: 512K, which locks out system RAM to run memory sensitive programs, AUTODATE, sets the system date and time without a clock card, AUTOFOLD, allows changes in execution order of AUTO folder programs, AUTOGEM, will autoboot a selected GEM program from the desktop, CAPSLOCK avoids accidental activation of the CapsLock key, FC, compares binary data files, displaying the differences, FDEL, deletes files with no chance of unauthorized recovery, FILELOCK, encrypts and decrypts disk files for maximum security, GREP, searches textfiles for selected character strings, HARDAUTO, runs AUTO folder programs from the hard drive, HEADER, displays technical information about program files, HEX, displays binary data and program files in hexadecimal, HIGH, allows other AUTO folder programs to run in medium resolution, KEYCODE, displays keyboard scan and ASCII codes for selected keys, KEYCOMBO, sets up 4 "hot keys" for screen, printer and reset functions, ONEHAND, allows one-handed use of Alternate, Control and Shift keys, RESET, flushes memory completely whenever the system is rebooted, STSELECT, selectively enables AUTO folder programs and desk accessories, TOUCH, sets the date and time of selected files, 'UNHIDE' sets or resets the disk file attribute flags, VERIFY, speeds up disk writes when verification is not necessary. MichTron, Inc. ($39.95)

Why Wait?

Why Wait? consists of three essential utilities designed to maximize efficiency and minimize time waiting for the ST. A DISK CACHE speeds up nearly all programs by causing disk accesses to come from memory rather than the disk. Typical speedup of programs is between 50% and 300%. A RAMDISK also speeds up your system by using the RAM as a super fast drive, and a PRINT SPOOLER allows the user to prints and at the same time continue to run their favorite program. After customizing the setup parameters (CACHE, RAMDISK and SPOOLER size are all user configurable), the program is installed in the AUTO folder of the boot disk. Programming Sciences, Inc. ($54.95)

[Note: the titles above are selected from new offerings I receive information about each month. All products named are the trademarks of their respective manufacturers. Their mention here is intended for informational purposes only and does not constitute either a recommendation or endorsement.]

ATARI'S SMALL MIRACLES

By Steve Matsumoto

(Note: I am taking a break this month and letting a truly excellent programmer, Steve Matsumoto of Austin, Texas, take over. You've seen his work in the column before, and it's a safe statement to say it's the best the column has to offer. So when a disk arrived the day of the deadline, and I was staring at a blank screen devoid of ideas for programs, it was a very natural process that lead me to hand the whole column over to him. I hope you enjoy the programs as much as I do. And yes, some of the program lines look real strange; this is due to the extreme compression of statements I had to use to get Steve's lines onto a normal 38 character wide screen; just grit your teeth and type it in, it is well worth the effort. -- Mark Brown)

It's been a while since I last contributed to Small Miracles, although I've had a few ideas that I kept meaning to polish up and send in. Finally your looser restrictions on program length and Joe Water's May editorial reminding folks that you only get as good as you give combined to get me back to my somewhat neglected 800. Here are the results. The enclosed disk has four BASIC programs, and a backup copy of each.

AUTOLIST

```
0 DIM Q$(1),5$(1),L$(800),L(7):L(0)=39
:L$="DIM Q$(1),5$(1),L$(800),L(7):L(0)
=39:L$="
1 FOR N=0 TO 1:NEXT N:L(1)=39:L$(101,1
40)="FOR N=0 TO 1:NEXT N:L(1)=39:L$(10
1,140)="
2 FOR N=0 TO 7:L(2)=32:L$(201,233)="FO
R N=0 TO 7:L(2)=32:L$(201,233)="
3 Q$=CHR$(34):5$=CHR$(32):L(3)=43:L$(3
01,344)="Q$=CHR$(34):5$=CHR$(32):L(3)=
43:L$(301,344)="
4 K=N*100+1:? N;5$;L$(K,K+L(N));:L(4)=
50:L$(401,451)="K=N*100+1:? N;5$:L$(K,
K+L(N));:L(4)=50:L$(401,451)="
5 IF N<7 THEN ? Q$;L$(K,K+L(N));Q$:L(5
)=52:L$(501,553)="IF N<7 THEN ? Q$;L$(
K,K+L(N));Q$:L(5)=52:L$(501,553)="
6 L$(701,706)=L$(114,119):L(7)=5:L(6)=
50:L$(601,651)="L$(701,706)=L$(114,119
):L(7)=5:L(6)=50:L$(601,651)="
7 NEXT N
```

AUTOLIST is a totally useless program, but amusing. The idea is to write a BASIC program that reproduces itself -- that is, when you RUN it, it prints a listing of itself. (Of course, to make the exercise interesting you have to disallow use of the LIST command!) My solution is based on a version I saw in Microsoft BASIC.

MADNESS

MADNESS is a joke program that's even more useless than AUTOLIST. First do a NEW to clean out the BASIC variable tables, and then LOAD the program. Put up some stuff on a GR. 0 screen -- a listing of MADNESS itself is convenient and as good as anything -- and then RUN the program. A set of wandering, overlapping "windows" will then proceed to bounce around the screen until you get bored enough to BREAK out of it. Not exactly hilarious -- well, OK, pretty dumb, really -- but all-night hacking sessions do strange things to one's sense of humor.

```
10 DIM 5$(960),T$(960),X(4),Y(4),DX(4)
,DY(4),P(4),C$(960),X$(1),Z(4):Z(1)=1:
Z(2)=21:Z(3)=481:Z(4)=501:X$=CHR$(128)

20 5$(960)="A":X(1)=0:Y(1)=0:X(2)=20:Y
(2)=0:X(3)=0:Y(3)=12:X(4)=20:Y(4)=12
30 F=PEEK(88)+256*PEEK(89)-PEEK(140)-2
56*PEEK(141):RESTORE F:V=PEEK(134)+256
*PEEK(135):POKE V+2,PEEK(183)
40 POKEV+3,PEEK(184):T$=5$:F.J=1TO40:T
$(J,J)=X$:T$(440+J,440+J)=X$:T$(480+J,
480+J)=X$:T$(920+J,920+J)=X$:N.J
50 C$=5$:FOR J=0 TO 23:K=40*J+1:T$(K,K
)=X$:T$(K+19,K+19)=X$:T$(K+20,K+20)=X$
:T$(K+39,K+39)=X$:NEXT J
60 FOR J=1 TO 4:T$(Z(J),Z(J))=CHR$(144
+J):DX(J)=1+INT(PEEK(53770)/64):DY(J)=
1+INT(PEEK(53770)/64):P(J)=60+10*J
70 DX(J)=DX(J)*(1-2*(RND(0)>0.5)):DY(J
)=DY(J)*(1-2*(RND(0)>0.5))
80 FOR M=1 TO 8:5$=C$:X(J)=X(J)+DX(J):
Y(J)=Y(J)+DY(J):IF X(J)<0 OR X(J)>20 T
HEN X(J)=X(J)-2*DX(J):DX(J)=-DX(J)
90 F=(Y(J)<0 OR Y(J)>12):Y(J)=Y(J)-F*D
Y(J)*2:DY(J)=DY(J)*(1-2*F):P(J)=P(J)+D
Y(J):SOUND J-1,P(J),10,4
100 FOR R=0 TO 11:K=40*(R+Y(J))+X(J)+1
:L=40*R+Z(J):5$(K,K+19)=T$(L,L+19):NEX
T R:NEXT M:SOUND J-1,0,0,0:C$=5$:NEXT
J:GOTO 60
```

MEMOPAD

MEMOPAD, on the other hand, is a utility, plain and simple. I use it to write quick and dirty documentation to go along with BASIC

programs. What it does is allow you create a document that is just a BASIC listing consisting entirely of comments. A touch typist who doesn't make mistakes can create a document without ever looking at the screen or hitting RETURN.

```
10 POKE83,39:?"START";:IN.LN:?CHR$(125
):POKE702,0:CL.#1:OP.#1,4,0,"K":DIM B$
(12):B$=" ":B$(12)=" ":B$(2)=B$
20 ? :? :PL=PEEK(84):IF PL>17 THEN ? C
HR$(125):? :? :PL=PEEK(84)
30 ? LN;" REM ";:CL=PEEK(84):IF CL>17
THEN POSITION 2,CL:? B$(1,12):POSITION
 2,CL:LN=LN-10:GOTO 90
40 GET #1,KEY:L=PEEK(84):COL=PEEK(85):
IF KEY=155 OR KEY=125 OR KEY=28 OR KEY
=29 THEN GOTO 40+50*(KEY=155)
50 IF KEY=27 THEN GET #1,KEY:L=PEEK(84
):? CHR$(27);:GOTO 70
60 IF KEY=32 AND COL>30 AND L<=CL+2 TH
EN ? B$(1,40-COL);:LN=LN+10*(L=CL+2):G
OTO 40-10*(L=CL+2)
70 IFCOL>32ANDL=CL+2THENSOUND0,60,10,8
:F.I=1TO20:N.I:SOUND0,0,0,0:IFCOL=39TH
EN?CHR$(KEY):LN=LN+10:G.30
80 ? CHR$(KEY);:GOTO 40
90 ? :? "CONT":POSITION 2,PL-2:POKE 84
2,13:STOP
100 POKE 842,12:LN=LN+10:GOTO 20
```

You are first asked for a starting line number, which ought to be greater than 100 (otherwise you'll overwrite MEMOPAD itself.) The screen clears, the line number is printed, along with a REM statement, and you can then proceed to type in your text. Unless you make a mistake that requires editing, you just type: MEMOPAD automatically adjusts lines (with a crude word-wrapping mechanism), types the line numbers and REM statements, and incorporates the new program lines into itself using the ATARI's forced read mode.

As you the near the end of the third physical line of each logical line, you will hear a warning beep. If you have room to finish the current word, you can do that and then either hit RETURN, or type spaces until MEMOPAD moves you automatically onto the next line. Or you can just type right through the warning if you don't mind a word being split across logical lines. Hitting RETURN causes the latest batch of text (everything you've typed since you last hit RETURN) to be processed, so do not hit RETURN except when you want to finish off the current logical line. When the screen gets sufficiently full, it is automatically cleared for you. This is a little startling the first time it happens, but unless you are a very fast typist, it all works the way it should.

If you make a mistake, you can edit the current logical line by backspacing to the error. The left and right cursor keys also work, but the up and down cursor keys are disabled. If you've really messed up a line, just note the current line number, hit BREAK to exit MEMOPAD, and reRUN. When asked for the starting line, give the number where you left off, and continue as before. As this implies, you can stop at any time to use LIST to see what your document looks like so far. If you want to interpolate lines, or make other major changes, it's best to just exit MEMOPAD and make the changes directly with the good old BASIC screen editor. To make a clean exit out of MEMOPAD, hit RETURN to finish off the current line, then hit BREAK.

Since your document is a BASIC program, you can SAVE or LIST it to disk as usual. You may want to omit the lines corresponding to MEMOPAD itself, but I usually leave these in since this permits later revisions.

DICE

Finally, thanks to the new policy on program length, I can submit a project that I just haven't been able to skrunch down to 10 lines. Even at 15 lines I think you'll find it well worth the extra length.

DICE is a computerized version of a solitaire dice game created by noted game inventor Sid Sackson. The game is described in his book "A Gamut of Games."

Mechanics. The game begins with a display of the scoresheet. Five dice are rolled, and you are asked to study the results and discard one of the numbers. You are next asked to pick a pair from the remaining 4 numbers; type them one to a line, or separated by a comma. The pair you picked and the pair you didn't are each summed to give 2 numbers which are reported to you for confirmation: if you like what you see type "Y" at the prompt, otherwise hit RETURN and you can change your mind.

For example, suppose you roll 3-4-1-5-2 and discard the 4. This leaves 3-1-5-2. If you now choose 2,3 as your pair then your sum numbers are 5 (i.e. 2+3) and 6 (1+5). The numbers you discard and the sums you form are recorded on the scoresheet as "hits."

The game continues in this fashion, with 5 dice being rolled, one discarded, and the other four divided into 2 pairs. You are only allowed 3 different discard numbers: that is, once you have used each of three different numbers as your discard number, you must thereafter choose your discard number from these 3. (If none of these appear in your roll, you have a free choice of discard number.)

```
10 DIMN(5),D(12),DH(12),V(12),H(12),PT
(12),N$(8):F.J=1TO12:READN:V(J)=N:PT(J
)=0:H(J)=0:D(J)=0:DH(J)=0:N.J:Q=0:DN=0

20 GR.1:POS.0,0:?#6;"value sum hits  p
ts":POS.2,13:? #6;"discard hits":POS.0
,18:? #6;"SCORE":Z=40000
30 FORJ=2TO12:POS.3,J-1:?#6;V(J):POS.8
-(J>9),J-1:?#6;J:POS.2,1:? #6;"100 ":P
OS.2,11:? #6;"100 "
40 IF H(J)<>0 THENPOS.13-(H(J)>9),J-1:
?#6;H(J):IFPT(J)<>0THENN$=STR$(PT(J)):
POS.19-LEN(N$),J-1:? #6;N$
50 N.J:POS.6,18:?#6;SCR:F.L=1TO3:IFD(L
)<>0THEN POS.8,13+L:?#6;D(L):POS.13,13
+L:? #6;DH(L)
60 N.L:X=0:F.J=1TO5:N(J)=1+INT(RND(0)*
6):X=X+(N(J)=D(1))+2*(N(J)=D(2))+3*(N(
J)=D(3)):N.J:IFQ THEN?"DONE":END
70 ? "Discard one from ";:F.J=1TO5:?N(
J);" ";:N.J:F=0:IFDN=3ANDX=0THEN?"(fre
e!) ";:F=1
80 TRAP 70:IN.N:D=0:K=0:F.J=1TO5:K=K+(
N(J)=N)*(J-K):D=D+(D(J)=N)*(J-D):N.J:I
F K=0OR(D=0 AND DN=3 AND F=0)THEN 70
90 TRAP Z:T=N(5):N(5)=N:N(K)=T:IF F=0T
HEN DN=DN+(D=0):D=DN*(D=0)+D*(D>0):D(D
)=N:DH(D)=DH(D)+1:Q=(DH(D)=8)
100 ? "Pick a pair from ";:F.J=1TO4:?N
(J);" ";:N.J:TRAP100:INPUTN,N2:TRAP Z
110 A=0:B=0:F.J=1TO4:A=A+(N(J)=N)*(J-A
):B=B+(N(5-J)=N2)*(5-J-B):N.J:IF A=0 O
R B=0 OR A=B THEN 100
120 T=N(4):N(4)=N(A):N(A)=T:B=(B=4)*A+
B*(B<>4):T=N(3):N(3)=N(B):N(B)=T:W=N(1
)+N(2):Y=N(3)+N(4):H(W)=H(W)+1
130 H(Y)=H(Y)+1:?"Sums are ";W;" and "
;Y;", OK";:TR.130:IN.N$:IFN$<>"Y"THENH
(W)=H(W)-1:H(Y)=H(Y)-1:TRAPZ:G.100
140 F.K=WTOY+0.1STEP0.1+Y-W:A=H(K):A=A
-(A>10)*(A-10):PT(K)=-200*(A<5)+V(K)*(
A-5)*(A>4):N.K
150 SCR=0:F.J=2TO12:SCR=SCR+PT(J):N.J:
POS.6,18:?#6;SCR:G.20:DATA 0,100,70,60
,50,40,30,40,50,60,70,100
```

For example, say at some point you have used 2,3, and 5 as discards in previous rolls. You now roll 1-4-2-6-3. You must discard either the 2 or the 3.

The game ends when you have used any one of your discard numbers 8 times.

Scoring. Your score is based on the hits on the sum numbers. Any number that is hit 0 or 5 times scores no points. Any number that is hit 1-4 times scores a penalty of -200 points. Any number hit more than 5 times scores the value of that number (see the VALUE column) for each hit over 5, except that hits in excess of 10 score no additional points.

The score sheet is updated with each new roll to show your hits, discards, and points. Early in the game your score will be negative, and then (if you're good) it will slowly climb back up. Sackson suggests that 500 is a good score, and I can confirm that this takes careful planning and good luck. In fact, it takes a fair amount of practice just to wind up with a positive score!

Keep the miracles coming, Steve Matsumoto.

CLASSIFIED ADS

[Classified Ads are free to Current Notes subscribers and WAACE club members ($5 to anyone else). Send your ad to CN Classified, 122 N. Johnson Rd., Sterling, VA 22170. No commercial dealers please.]

FOR SALE: Atari 520 ST, color monitor, SF354 disk drive and software. Software includes Degas Elite, Regent Word II, OSS Personal Pascal, Major Motion, Flight Simulator, more. $550 or best offer. Call 703-860-4440.

FOR SALE: ATARI 1025 PRINTER. Reliable workhorse for 8-bit Atari computers. Needs no interface. With cable. $75. Call Alan, (703) 573-3543, before 10 p.m.

FOR SALE: Atari ST Development Kit - Complete Package, purchased new May, 1987, unused, $200.00, Barry Orlando, 1120 Deerfield Dr., Napa, CA 94558, (707) 257-2326.

TEXAS HOLDEM POKER DISK. Get ready for Las Vegas poker! Requires 8-bit Atari 48K RAM, Atari BASIC and joystick. Not for ST or PC models. 8 computer opponents, rotating blind-bet, $10-20 limit-game. Send check or money order $29.95 plus $3.00 shipping. Maryland residents ad +5% sales tax. Order from: Kumikata, PO Box 2772, Kensington, MD 20895.

FOR SALE: Okimate 10 printer/Atari interface, ribbons, extra print head, paper, software for printing, $125 or best offer. Computereyes with Graphics 9 software $70 or best offer. Sargon III unopened, $20. Other 8-bit software -- original only -- write for list (include $0.25 handling). Harold Summer, 12262 Wye Oak Commons Circle, Burke, VA 22015.

ACCENT ON BASIC COMPUTING

A Little This and a Little That

By Ron Peters

In reviewing my past articles, it seems like I've covered most of the bases. One subject I haven't addressed is that of using a modem to transfer computer data via Ma Bell's "Twisted pair" (as we Radio Amateurs call the telephone lines), but I'll save that one for later.

This month I'd like to explore some miscellaneous items that are, by themselves, not worthy of a separate article.

For example, have you ever been working with a program that prompts (asks) you for some input (a name, number, menu item, etc.) and no matter what you try the program won't accept anything you type? Well, cheer up Bunkie, for put your face to the Sun and hit the CapsLock key. The program may be looking for upper case input and you're in lower, or vice versa. Sounds stupid, but it's happened to me.

Did you know that the COPY command in Atari DOS can copy a program or file from disk to the screen (CRT), or to your printer? Yup, this handy-dandy function can do all sorts of neat tricks. Like:

COPY (from, to)
D:filename, E: (screen)
D:filename, P: (printer)

Most of you know that, but I'll bet there is someone out there who wasn't aware of this. Refer to your DOS manua for other tricks this DOS command can do.

Ever wipe out (delete) a file from a disk and then realize this was your only copy? Don't despair, there is a function in Atari DOS 2.5 utilities to repair the damage. Or, you can purchase separate programs from the NOVATARI library (like Undeleter) that will recover the file. You see, the file is still on the disk, only the table of contents has been changed.

Do you have the Call-Waiting feature on your telephone? Fine, just don't expect to use a modem on the same line. If you are downloading (receiving) a file from another computer and the phone goes "beep", your file goes South! Oh well, Mother tried to tell you that not everything in life would work.

Anyone out there still using Atari DOS 3.0? You are? Take my advice (I've said this before), cut off the disk jacket and use the disk for a frisbee. DOS 2.5 makes life much easier and you'll be compatible with the rest of the world. DOS 3.0 is not compatible with the earlier DOS 2.0 (whereas 2.5 is), so if you ever want to swap programs or files with a friend, get rid of DOS 3. DOS 2.5 has a conversion program that will allow you to transfer your DOS 3.0 files to DOS 2.5. It's worth the trouble.

If you use AtariWriter Plus (word processor), as I do, and you have to make a custom printer driver, transfer that driver program to each disk that you use to store files. Doing this saves a lot of time when it comes time to print, for you don't have to put the program disk in the disk drive to load the printer driver. Use the DOS COPY command to do this.

Finally, a plea to my fellow readers. Have you run into computer quirks (like some of the above) that you would like to share with other CURRENT NOTES readers? If so, write, call or telegram me (I'm listed on the NOVATARI HOTLINE) and I'll be glad to include your item in a future column (with appropriate credit, of course).

I'd also welcome some input as to some subject areas you'd like to see covered in this ABC column -- I hate to admit it, but I'm running out of ideas. And, unless I can come up with some fresh articles my franchise will be pulled and this space will be relegated to advertising for the Amiga!

Well, fan (I use the singluar as my wife is probably the only one that reads this column), that's about all for now. Tune in next month for a dazzling, in-depth article on the wonders of telephony and asynchronous communications.

MOVING?

Be sure to get your change of address in if you are moving. CN, which is mailed under second-class rates, IS NOT FORWARDED. Post Office tears off the page with your address, puts new address label on and sends it back to us. We get the change of address (and a bill for $.30) and your issue winds up in the garbage.

LIGHTSPEED C ON THE 130XE

An Outstanding, Cost Effective, Programming Tool

Review by Walter W. Jones

To begin, a comment about the Atari 600, 800, 800XL and 130XE series computers (hereafter referred to as the 130) is appropriate. The lack of a commercial high-level language has, obviously, prohibited its extensive use on Atari's 8-bit line. But, the easiest way to get new programs is to port them from another system and fix the few machine-dependent pieces. The cost of porting a program to a new computer is only about 10 per cent of the original development cost, assuming that a comparable language exists on the target computer. *Basic* is too slow to do serious work and not very compatible anyhow. *Action!*, although a vast improvement over *Basic*, is not directly compatible with any other language.

Two features which are indispensible for a development language are compact coding and linkable modules. The former is necessary so that writing all of the necessary but simple routines does not take an inordinate amount of time, while the resultant object code is reasonably fast. The second feature is the ability to code and debug modules. This is the only way to make them quickly and without having to reinvent the necessary low-level stuff each time. For this reason, "programmer friendly" languages have libraries and means to combine modules. They emphasises the concepts of local and hidden over global and public. Otherwise, the scaffolding necessary to debug the code is impossible to build, and the time for translation becomes tedious.

The first requirement has sent all serious development over to *Action!* However, the second requirement suggests that little will be developed for the 130. Until now, that is.

Clearstar Softechnologies has brought a product to the market which solves both of these problems in a very nice way. There are still some difficulties and shortcomings, but the primary impediment to software development and portability on these "low level" computers is removed. The compiler is for a C Language. C is a popular language for many conputer systems. Most of that is historical. It was the first language to be used widely in systems development work which was a significant step above assenbly language. C was a step up in that it was possible to write compact code which was still fast. Many dialects of C have developed. Lightspeed C incorporates one of the more common variations and is a subset of the standard Ritchie and Kernigan specification.

What this all means is that programs developed on the ST can be ported to the 130 and vice-versa. Obviously there will be some differences, especially in graphics. But much of the translation and recoding problems disappear. To prove the point, I wrote a simple fractal generator in C and ran it on the Atari 130XE, my IBM AT (yes folks, the IBM world does exist and is used for things besides word processing), and an Apollo workstation. In each case, I wrote each module separately, compiled, tested and stored it on a disk file. With the allowance for differences in graphics, all tests performed the same way. The 130 is slower than the Aplllo. On the other hand, the latter cost one hundred times as much. Unfortunately, I do not have access to an ST so that comparison is not possible.

The *Lightspeed C* development system comes as two disks, or four sides of our single-sided floppy disks. Effectively, there are only two sides required and these are contained on sides one and two of the first disk. What the authors have done to further enhance development is to include many of the special functions within ther own operating system. To aid use and distribution, the second disk contains alternate compilers and linkers which do not depend on their specialized DOS being present. Libraries are provided for most of these fuctions. The combination is a very nice touch and should be appreciated by anyone doing development for the Atari 130XE.

The mechanics of using the system will be familiar to anyone who has done development work on a large system. There is a full-screen editor, a compiler and a linker. The editor serves both for writing the program and for looking at errors during compile. This is where I sorely miss a hard disk on my 130. There is a fair bit of code swapping which takes place. Once again to the credit of Clearstar, all the necessary modules fit on a single disk, or ramdisk, with room left for pieces of code. Actually, it is not hard to have the source on one disk, say a floppy and the compiler, linker and editor in ramdisk. Load time for the compiler, linker and editor then become miniscule. To facilitate such usage, a batch file processor is provided which automates the setup procedure.

There is another feature well worth mentioning. A library of *Action!* entry points, including the floating point routines, is part of the distribution. This makes it possible to

start with *Action!* and convert to C. Names are unique, or perform equivalent tasks. For anyone considering a move from the 8-bit to the 16-bit world, this feature is truly outstanding. Naturally, it is possible to reverse the process and convert to *Action!* Since compiled *Action!* code is somewhat faster than the equivalent compiled C code, this is worthwhile for that last little bit of speed necessary for good simulations. This crosswalk between systems (ST, 130, ...) provides the continuity lacking in the Atari Corporation offerings. Finally, there are a number of modules to aid in code development and debugging, i.e. for code compaction and optimization. Also included are several sample programs in C and in *Action!*, just to get started.

As might be expected, the product is not perfect. C is not a friendly language. It is a compiled language with a very strict syntax. This compiler does not improve on that in that the pointer for errors, as well as the error message themselves can be misleading. Two additional faults stand out. The first is that the editor is not easy to use in screen mode. It is too much like the Basic editor. Perhaps it utilizes the hooks in the ROM, but the *Action!* editor is certainly better. Of course, one can use the *Action!* editor, or even ones's favorite word processing package. But this negates some of the usefulness in the tight coupling between the compiler and the editor. The second point is that the floating point routines are difficult to use, just as in *Action!* And there is no floating point type. Since other types are defined, it would have been a good place to include them. After all, 6-byte floating point is not intrinsically different than a string, or a two-byte integer. The machines still have an 8-bit buss. The worst failing, however, is the manual which is atrocious. Besides being a hodgepodge of information, the important facts are well hidden.

Why then is this such a good product? Well, it is a reasonable subset of the "standard". It makes it possible to port programs to the ATARI 130 from other systems, so we obtain good value, while the cost to the developer is minimized. This fact translates into more and better programs being ported. Also, it follows the form of compilers and editors on larger machines and so makes an ideal training tool for anyone wanting to trade up. In the end, work which is done on the 130 can be utilized on other, presumably larger, computers, always a question when considering new hardware and software.

At a retail cost of $39.95, ***Lightspeed C*** is an outstanding product, and very cost effective. For the 8-bit Atari, this should prove a boon in the addition of new releases. I would anticipate that revisions of the Lightspeed system can and will solve the relatively minor problems.

TIPS'N'TRAPS

By Jim Stevenson

Here we are for number 23. It's hard to believe this column has been around for over two years, now. Unfortunately, we've hit a dry spell with questions, which explains the "slight" shortness of the column this month. It might be because of final exams (A.K.A. "The Brain Presses"). Who knows? In any case, let's get some answers for these stray questions.

Jim.....(703)378-4093
Electronic Age.....(703)620-0851
Merlin's Litterbox.....(703)250-7303
A*R*M*U*D*I*C.....(703)569-8305

ALTERNATE REALITY

Q. Can someone tell me how to get started in this game? I keep dying. How do I accumulate hit points?

-"Bengoshi"

FANTASTIC 4

Q. Does anyone know how to rescue the Thing when he is stuck in the tarpit? I've tried everything but cannot rescue him.

-"Flaming Carrot"

HIJINX

Q. How do you get in the house?

-"Max Quordlepleen"

A. This might open a few doors for ya! Be brave as Sheriff Roy in "Fastest Blender in the West,"...Be bold as Captain Bob in "Cannibal Buffet of the East,"...Be clever like the tailor in "Vampire Penguins of the North,". Couple that with the fact that the mailman has a particular peculiarity to it.

-Sam Wright

HITCHHIKER'S GUIDE TO THE GALAXY

Q. I know how to get off the first part but then ford takes you to the pub. What do you do there? I drink the beer, and the next thing you know, the game is over.

-C. Hamlin

A. Go back to the house and hang around until something happens. Trust me, you'll know when it does.

-Diallo Evans

KORONIS RIFT

Q. Does anyone know what the different artifacts do and what they look like?

-"Flaming Carrot"

MYTHOS

Q. How do I call a boat? I see the boat in the demo but don't know how to get the boat to come and pick me up.

-Joe Julian

NEVERENDING STORY

Q. How do I get in the castle?

-Joe Julian

PHANTASIE

Q. Has anyone killed the "Dark Lord" in the dungeon on the island? Are you supposed to kill him? Also, I can't get scrolls 19 and 20 to print. Where are scrolls 16, 17, and 18?

-Pete Kilcullen

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

A. Get all the treasures in the first level, and go back to the top of the pyramid (where game starts w/ title screen, etc.), and then you get the first 3 characters of the password. Go back in and repeat the same procedure 2 more times, to get the complete password: "syn is op" for all 3 levels.

-Anonymous

SPELLBREAKER

Q. Has anyone figured out what to do after getting the outcropping cube? THAT was a hard puzzle!

-Sam Wright

TRINITY

Q. How do you avoid dying in the nuclear explosion?

-"Max Quordlepleen"

A. Keep one thing in mind: it's a windy day.

-Sam Wright

Q. I realize it's windy, but that doesn't seem to help me. Do I make a mistake in feeding the birds, and does the pram have anything to do with it?
-"Max Quordlepleen"

A. The wind is blowing a certain direction. You can enter the pram.
-Sam Wright

WIZARD'S CROWN

Q. Has anyone discovered the emerald key in Wizard's Crown? I think it's needed to enter the mansion that's about half-way in the ruins.
-Craig Waive

A. Look in the Old Thieves Guild.
-Jeffrey R. Hand

CORRECTION

We slipped up last month. We forgot to note that the ARC, ARC, ARC, ARC article was reprinted from the May, 1987 issue of THE ATARI JOURNAL. Our apologies for the oversight.

CURRENT NOTES ST LIBRARY

[Note: programs are either (1) public domain, (2) copyrighted but distributed freely to the public (e.g. AtariWriter and NEOCHROME), or (3) 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. DISKS ADDED THIS MONTH ARE UNDERLINED.]

UTILITY DISKS

#18: NO.1. 34 misc. utility programs
#25: DEGAS UTILITIES. fonts, pr drivers, conver prgs.
#30: NO.2. Assembler; Forth-83; printdir; Labels...
#36: DESK ACC NO.1. calendar, clocks, screen snapshot.
#61: PRINTER DRIVERS. First Word, ST Writer, Degas
#63: NO.3. WP desk acc,floppy indexer,file squeeze.
#72: NO.4. Format/copy 400K/800K;proff; desk accs..
#73: NO.5. archiver; disk lib prgs; disk speed x...
#81: NO.6. dir lister;quick formatter; Font Editor.
#94: NO.7. clipboard, banner, marque, analyzer, blast, picdex.
#95: NO.8. formatter, convert DEGAS fonts to D.Elite, Elec Circuits for Easy Draw.
#102: NO.9. bulk erase, disk format acc, disk labels
#107: RAM DISKS. 25 ram disks + 7 auto loaders
#113: NO.10. TURTLE, HD backup; prog calculator; undeleter; format3; vidcol.prg
#117: DESK ACC NO.2. acc load, eternal, format.acc, index, kalklock, modzdil2, new word, startup1.1
#121: NO.11. address bk, text browser, format.gem, arxx, gem font ed., font loading acc. start1.1.
#126: PUB PARTNER UTIL. Helvitica + pr.drivers
#127: FONT EDITORS/LOADERS. Font loader, GEM FONT ed.
#131: NO.12. Programmer's Utility Disk: uudecode, uuencode, bucket, kill scach, make, setinit, verify, volume, case, mase, 1_filepr
#132: NO.13. Disk library prg (DISKCAT), Editors (LESS & VIX), disk copy programs (AUTODISK, DCOPY), startgem, access, rocp.
#144: NO.14: Alarm clock acc, a C shell, buffer stup program, coldboot.tos, display any res DEGAS on any res monitor, script for DEGAS slide show, save screen in Degas Elite format, harddisk auto boot program, multiple file printer, mouse editor, print utility for Modula-2 source code, spelling checker, rambuffr.acc - variable size ramdisk and print spooler.
#145: NO.15: ASL (print out multiple documents), GULAM (command line interpreter), HDSCAN (selectively back up hard disk), LABELS (disk label program), STARTGEM (start GEM program from AUTO), MAKERSH (reads resource file and outputs C source).
#150: FIRST WORD PRINTER DRIVERS
#154: NO.16: MODULA-2 UTILITIES (context2, m2print, makefile, qcopy, and m2proc)
#155: NO.17: GENERAL PURPOSE (dcopy20, diskfix, megalit, most, picsw07, qcopy, quiklbl2, ymodmbat.)
#162: HARD DISK UTILITIES (dir count, gets around 40 folder limit, C source to hard drive directory, suproa ver 2.61 utilities, turtle hd backup ver 2.15, multiple hd to supra)

GAME DISKS

#21: NO.1 (Color/Mono) Megaroids, Mastermind, Othello, Backgammon, Ripcord, Target, Life, Journey
#37: NO.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. (C) Joust, Time Bandits, and Cracked.
#54: MONO NO.1. PuzzlePuzzle
#62: HACK. Dungeons and dragons like game
#80: MONO NO.2. Monopool; Krabat Chess game.
#100: NO.3. (C) Football, Break Out, Missile, 4 Adv. Games (Larn, Magnon, Twilight Zone, & Ogre).
#101: NO.4. (C) Atartrek, Celestial Caesars (new ver.), Krabit (chess), Twixt, ST Aggrevation.
#112: NO.5. (C) Checkers, slot Machine; Warzone,,,
#122: NO.6. (C) Haunted House, Monopoly, Backgammon
#135: SHANGAHI DEMO. (Color/Mono) Fascinating new puzzle.
#139: MONO NO.3. Larn2, Ogre, Ataritrek, Maze Maker, Checkers, Battleship, Window Ball.
#140: NO.7. (C) Pente, Sensori, Spacewar, Tripple Yahtzee, Wheel of Fortune
#141: NO.8: (C) Azarian and DGDB (similar to SHAMUS).
#153: EAMON ADVENTURE GAMES. All the latest versions (Eamon Beginner's Cave, Devil's Tomb, Eamon Death Star, Holy Grail, 1st Eamon game version, Ver 2.0 of Eamon main hall.

PICTURE DISKS

Compressed format using TINY programs (included on each disk). Color unless otherwise noted. Disk Numbers: #40, #41, #42, #48(mono), #51, #52, #65, #75, #96. TINYPICS: #108 (Ghost Busters; Raiders); #109 (Empire Strikes, Shuttle); #118 (Sci-Fi); #119 (Vehicles 1); #120 (Cartoons 1); #137 (Cartoons 2); #138 (Animals); #146 (Famous Folk); #161 (Vehicles 2-mono) (B-36, bell222b, escort1, extra1, f15strk, hele, mgtf, phalarop, refuel, romulin, shuttle/1/2, sparrow, sr-71a, stealth, topgun, travel2, U-2, vaxhall).

CLIP ART DISKS

For use with Degas or Publishing Partner. #147: COLOR-1; #158: MONO-1; (animals, flags1/2, symbols1/2/3, astrology, custom1/2/3/4, christian, military1/2), #159: MONO-2 uncompressed, 10 screens of holiday and "fun" clip art; #160: MONO-3. (bluejay, canadago, carstruk, cheata, chipmunk, clipart1/3/4/5/6/9/B/C, grabber, jaguar, sports1, sports2, sports3, sports5).

TERMINAL PROGRAMS

#84: ST TERM DEMO DISK. Demo of V 2.1; 2 more term prgs
#88: TERM PRGS NO.3. UNITERM VT100 EMULATOR, Version 1.7B
#142: TERMINAL DISK No. 5: Kermit, QT, Zenith, ZModem, Forem Tutorial, Flash Download, GEM Terminal Prg.

GRAPHICS

#7: DEMOS No. 1. 32 graphics demos.
#14: NEOCHROME. Program, docs, pictures.
#50: DEMOS No.2. SILENT SERVICE screens, 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 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.
#129: SPHERES! DEMO (C) Another super animated ball demo.
#136: MICRODEAL DEMO PROGRAMS. Goldrunner, Tanglewood, Airball, and Sprite Construction Kit.
#151D: SPACE PROBE - A Cybermate Animation (DS & 1Mb)
#152: PD3CTL - Motion control Language for use with CAD 3-D, Version 2.0.

MUSIC DISKS

#34: MUSIC ON YOUR ST. ST MUSIC BOX, Dlx 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 Bianco) 1Mb
#114: MUSIC STUDIO 'SNG' DISK #2. 40+ songs
#134: ST-REPLAY. Digitized sound demo.

LANGUAGE DISKS (Include Source Code)

#8: "C" PRGS NO.1. 17 C programs w/source
#9: LOGO PRGS. 30+ LOGO programs.
#22: BASIC PRGS. 17 BASIC prgs, command summary
#31: PASCAL & MODULA-2. OSS files, + various demo prgs
#33: "C" PRGS NO.2. 12+ C programs w/source
#49: PASCAL PRGS NO.1. 46 PASCAL files.
#53: ATARI ST FORTH-83 MODEL. by Laxen & Perry
#71: FORTHMACS Ver 1.1. (c) 1986 by Bradley Forthware
#82: "C" PRGS NO.3. 13 C programs w/source
#83: MODULA-2 PRGS NO.1. Shell for ARC.TTP +.....
#92: MODULA-2 PRGS NO.2. ST Speech Modules +.....
#93: PASCAL PRGS NO.2. spelling checker source...
#97: LITTLE SMALLTALK. language, editor, manual, prgs
#98: XLISP V1.7. language, manual, editor, C source ..
#110: MODULA-2 PRGS NO.3. AES Library modules.....
#111: PASCAL PRGS NO.3. source to ATARTREK...
#123: SHAREWARE C COMPILER. C, editor, ramdisks, etc.
#124: ICON LANGUAGE, V6.3. by Fonorow & Nowlin
#130: GFA BASIC PRGS NO.1. GFA Run only ver., Terminal prg., Sprite ed., Torpedo game, Fractals, Archsell, Format2, Graphics Demos
#133: "C" PRGS NO. 4. Source code to uudecode, uuencode, kermit.acc, citadel bbs & utilities and a spreadsheet program.
#148: GEM TUTORIALS, COLUMNS 1-9
#149: GEM TUTORIALS, COLUMNS 10-17
#156: "C" PRGS NO. 5. source for file selector box, two make utilities, source for QT term prg. and term prg that supports xmodem, ymodem and zmodem.

APPLICATIONS

#15: ST WRITER, Ver 1.71e. 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.
#116: ST SOFTWARE DATABASE (by Andy Nicola)
#125: GERMAN ST WRITER. (c) 1986
#135: SHANGAHI DEMO DISK. Try and solve this fascinating new puzzle. Color or mono.
#136: MICRODEAL DEMO PROGRAMS. Demos of Goldrunner, Tanglewood, Airball, and Sprite Construction Kit.
#157: MULTI-LINGUAL WORD PROCESSOR. By Drew Haninger. Demo Version. Includes Russian, Arabic, and some other fonts.
#163: EDITOR DISK. Includes PROEDIT by Jerry Cole, gen. purpose programming editor with outline feature and ConTEXT by Don Milne for use with Modula-2 or any language.

CP/M-80 EMULATOR

#86: CPM EMULATOR TOS DISK. CP/M-80 V2.2
#87: DISK NO.1. Disk in CP/M-80 format: 24+ prgs
#C1: TELECOM DISK #1. mexst & docs
#C2: UTILITY #1. 45 utility files
#C3: GAMES #1. adventure, aliens, blkjak...

MACINTOSH (MAGIC) DISKS

Disks contain Mac programs for use with the Magic Sac. Already in Magic format. Can be used directly.

#M0: MAGIC SAC 4.32. Latest version of Magic Sac prg.
#M1A: FINDER 4.1 STARTUP (BOOT) DISK.(for 1-Mb STs).
#M1B: FINDER 1.1 STARTUP (BOOT) DISK.(520ST/1040ST).
#M2: TELECOM NO.1. Free Term, Termworks, Kermit
#M3: UTILITY NO.1. Switcher, PackIt, Slicer, MacDump, RMover, Reverse Screen, DES, Font Doubler,...
#M4: GAMES NO.1. Missile Command, Solitaire, MacLuff, Space Bubbles, BackGammon, Smile, Bash Big Blue, Munch, Meldown, Maze 3D, Snow, Curves.
#M5: DISK LIBRARIAN. Disk Librarian Ver 1.81 with complete Magic library listing.
#M6: GAMES NO.2. Ashes, Wall Game, Wheel of Fortune, Black Box, Snake, Destroyer, Hex Puzzle, Office Attack, Symmetry Demo.
#M7: GAMES NO.3. MacYahtzee, Wiz Fire, MacCommand, MacBUGS, GO, Break the Bricks.
#M8: DESK ACC NO.1. DA Tester, F/DA Move, MockPrint, MockTerminal, MockWrite, MiniWriter, Moire, ArtThief, Ascii, File Hacker...
#M9: UTILITY NO.2. File Hacker, ResEd, RamStart 1.3, Font Doubler, Change App.Font, Desk Acc Mover, Convert Desk Acc.
#M10: GRAPHICS NO.1. Painter's Helper, Moire 3.0, Living Art, Pattern, Nightmare, 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, 3 fonts.
#M12: MACBILLBOARD. Mac Paint Clone (Shareware). Includes docs and sample pictures.
#M13: FONTS NO.1: Athens, Boxie, Dover, Hood River, ImageWriter, LED, London, Los Angeles, Luxor, Monaco, Park Ave., Pica, Ravenna, Rome, San Francisco, Seattle, Steel Brush, Ultra Bodoni, and Font/DA Mover 3.4.
#M14: FONTS NO.2: Bookman, Courier, Coventry, Dali, Geneva, Hebrew, Manteco, Shadow Box, SriLanka, Times, Walla Walla, and Font Display 4.6 w/docs.
#M15: GAMES NO.4: Space Attack, Amps 3.0, Jago, Nim, Macheads, Canfield, Lets Get Tanked, Bricks.
#M16: FONTS NO.3: Alice, Avante Garde, Berkely, Broadway< Camelot, Cartoon, Centura, Chancery, Eon, Exeter, Fallingwater, Fantaste!, Future, Ham, Helvitica, Hollywood, Lachine, Lineal, Madrid, Pittsburgh, San Quentin, Silicon Valley, Stencil, SupFonts, Unicol.
#M17: DUNGEONS OF DOOM 4.0: Graphic adventure game.
#M18: DESK ACC NO.2: alarm clock, calculator+, choose scrapbook+, DA File, Disk Labeler, Explorer, Hex Calc, LabelMaker, MemWindow, MockPackage+, Multi-Scrapbook, Popup, ProCount, ReadiPrinter, Ruler, Skipfinder 6.1, Sleep, Stars 1.6 and Timer.

ANALOG (ST/LOG) DISKS

Note: ANALOG NO. 41 is equivalent to STLOG NO. 1. We have renumbered the disks from NO.1 to correspond to STLOG numbers.

#A01 (Apr '86) #A04 (Jul '86) #A07 (Oct '86)
#A02 (May '86) #A05 (Aug '86) #A08 (Nov '86)
#A03 (Jun '86) #A06 (Sep '86) #A09 (Dec '86)

#A10 (Jan '87). C-manship, Dr. Floppe, Font Tricks, Slider Subs, Spell Binder, Windows, Part 1.
#A11 (Feb '87). Appt. Calendar, C-manship, database create, money prg, Window BASICs listing.
#A12 (Mar '87). C-manship, AS68, Poker Dice, Score4 prg, Midisoft demo prg.
#A13 (Apr '87). C-manship, Escher Cubes, Arc Shell, Ray-tracing demo, UNITERM term emulator, unsqueezer prg.
#A14 (May '87). C-manship, Clock acc., Assembly Line prg, CZ-Patch prgs, Steps & Triads, TVision prg, Escher Cupes source.

* PINFEED LABELS for your ST Disks like those used on *
* CN Library disks: 500($10); 1,000($18); 1,500($25) *

ADVENTURES IN THE MAGIC SACDOM

Here We Go Again!

By Jeff Greenblatt

Well, here we go again!!! As soon as I delivered my last article for the June issue discussing version 4.2 of the Magic Sac, Dave Small uploaded a beta version of 4.3 to me. Version 4.3 made programs such as *Fullpaint* and *Minicad* work. Two days later, I had a copy of version 4.31 which fixed *Excel*, but made *Fullpaint* crash. Before I had a chance to report the bugs in version 4.31 to Dave, version 4.32 was complete. As of June 16th, version 4.34 was the most current version available. WOW, this version really makes a lot of software work that didn't.

Version 4.34 has been uploaded to Compuserve and Genie. Actually, version 4.34 is just the DRIVER4.PRG which must be substituted for the one on your 4.2 disk which was purchased from Data Pacific. It will not work if you put it on your version 3.5 disk. That's why it was uploaded, it's an upgrade to version 4.2. If you don't have version 4.2, send $10 to Data Pacific for a copy. (Version 4.34 and later versions will also be available from CURRENT NOTES on Library Disk M0.) When you download the driver, make sure you download the text file which is a list of software that works with it. The file numbers in the ST Library on Genie are 3198 and 2992. The text file (uploaded with version 4.32) lists about 80 commercial software titles that now work; and some listed as not working actually do. I will refrain from duplicating this list because it would consume at least a page of CURRENT NOTES. Besides, at the rate these upgrades are coming, the list will have changed by the time this article is published. I will tell you this much, I have Pagemaker 2.0 up and running on Finder 5.5 with System 4.1, and it hasn't crashed yet. I may do September's article using Pagemaker 2.0 if I don't find any bugs. By the time you read this article, version 4.35 or higher of the Magic Sac will most likely be available. So keep checking Genie or Compuserve for updates.

The disk drive translator box should be available by the time you read this article. Notice I say SHOULD not WILL. As I write this article Dave Small is working on the finishing touches for the software to make it work. The preliminary info on the box is that it will be connected to the midi ports and the disk drive port of the last drive in the system. It will even work if you only have a 1040ST without an external drive. It will have its own Z80 processor to handle I/O and a separate power supply, and does not have to be disconnected when not in use. If you have a synthesizer connected to the midi ports, like I do, you will have to either disconnect your synth or get a "Y" adapter to use it. Oh, well, just more cables to add to the rat's nest. It will also have the ability to differentiate between Magic and Mac formatted disks automatically. If it's possible, I intend to get a translator box so I can discuss its merits or faults in the September issue of CURRENT NOTES. There is still no confirmed word on its price; somewhere between $100 and $200 is my guess.

Before I go on to the next subject, I want to take a moment to correct a statement I made in last month's article. The Magic Print Driver for Epson and compatible printers that Data Pacific offers is identical to Epstart by Softstyle. The only difference is that it is on a Magic formatted disk for those of you who don't have access to a Mac to port it to the ST. So if you don't have access to a Mac it will cost you $45 from Data Pacific. On the other hand, if you do have access to a Mac, Epstart is available from most mail order houses for $19-$25; the choice is yours.

New Library Disks

Four new disks have been added to the CURRENT NOTES ST - Magic Library. These disks are M15, M16, M17 and M18. All the files on these disks have been thoroughly tested and work finewith version 4.34 of the Magic Sac. Some may crash when using version 4.2 or less.

Disk M15, Games No. 4, contains eight new games, some of which are rather sophisticated to play. The titles are *Amps, Bricks, Canfield 2.0, Lago, Lets Get Tanked, MacHeads, Nim*, and *Space Attack*. I've played all of these games for some time now and have had many hours of enjoyment. My favorites are *Lets Get Tanked, Lago* and *MacHeads*. I highly recommend this disk if games are your thing. Make sure the sound is turned off on the control panel and from within the game (if available) before playing them or the system may lock up.

Disk M16, Fonts No. 3, contains 23 new fonts each in various point sizes, ranging from 9 to 36 points. There are even a couple of graphic image

fonts on the disk. One in particular, Fantaste, comes with a *MacPaint* file to show the keyboard layout equivalents. The disk also contains two desk accessories related to fonts. *SysFonts* shows examples of fonts which have been installed in the system. This DA is real handy when you are not sure which point size fonts have been installed that don't show up on standard font size menues in applications. The other DA, *DA Font2*, does essentially the same thing *SysFonts* does except it also provides information about the system fonts and desk accessories like memory consumption.

Disk M17 contains *Dungeons of Doom 4.0* for those of you who are into graphic adventures. In order to fit the program on a single-sided disk with a system to run it, I put a miniature 6K Finder on the disk. This Finder saves 40K of disk space and can be used on any disk by copying it over the standard Finder. It is rather limited compared to a standard Finder, but will get you in and out of an application. *Dungeons of Doom* is pretty tough to play, I keep getting killed. Make sure the sound is turned off from within the program before playing it.

Disk M18, Desk Accessories No. 2, contains 19 of the latest and best DAs for the Mac. The titles are *Alarm Clock, Calulator+, Choose Scrapbook+, DA File, Disk Labeler, Explorer, Hex Calc, LabelMaker, MemWindow, MockPackage+, Multi-Scrapbook, Popup, ProCount, ReadiPrinter, Ruler, Skipfinder 6.1, Sleep, Stars 1.6* and *Timer*. There is not enough room in this article to describe all of these DAs, so I will just describe a few of these gems. *Mockpackage* is a shareware product which contains the very latest versions of *Mockwrite, Mockprint, Mockchart* and *Mockterminal*, plus as an added bonus *Easymenu* is included. *Easymenu* converts the mouse to behave like it does on the ST. *Disk Labeler* makes real neat labels by using the mouse to choose the files on the disk for the labels. *DA File* is a great little utility which can be used within any program to rename or delete a file, or even tell you how much room is left on a disk. *Sleep* blacks out the screen when the computer is idle and flashs an icon randomly on the screen to remind you that the machine is still on. This disk is a must if you are a serious Magic Sac user.

Recovering Trashed Files

When files are placed in the Trash Can they are not deleted until one of the following three actions take place:

1. Empty Trash from the Special menu; or
2. When the disk is ejected; or
3. When an application is opened on the same disk.

Before any of the above actions take place, a file can be recovered from the Trash Can by double-clicking on the trash icon to open a window which will show what files are in it. Any files to be recovered can be dragged back onto the desktop.

Once the Trash Can is emptied, recovering a trashed file is a simple process if you have a utility to do so. When the Mac erases a file it doesn't remove the data from the file; it does remove some information about the file from the directory. The information affected by erasing a file is as follows:

1. The name of the file is removed.
2. The file creator is nulled.
3. The file type is nulled.
4. The sector map or file allocation map is updated to tell the finder that the sectors for the deleted file are available for use.

The first three items above are called the 'File Signature'. The file creator is a four-letter code which contains the origin of the program that created it. The file type is a four-letter code that contains the information on what type of file it is. The following are examples of file types and creators:

File	Creator Code	Type Code
MacWrite File(ASCII)	MACA	TEXT
MacWrite File(Formatted)	MACA	WORD
MacWrite Program	MACA	APPL
MacPaint File	MPNT	PNTG
MacPaint Program	MPNT	APPL
Excel Spreadsheet	XCEL	XLPG
Excel Graph	XCEL	MCBN
Excel Program	XCEL	APPL

The file data is not disturbed or overwritten until a new file is added to the disk. So, if a file is accidentally erased, it is possible to recover it so long as you don't add new files to the disk.

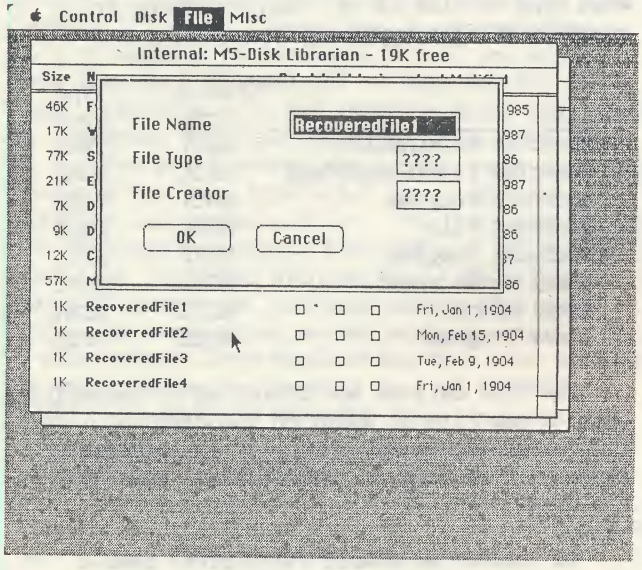
To recover an erased file, first make a backup copy of the disk which contains the file you want to recover. I recommend doing this just in case the process of recovering a file trashes other files on the work disk. The next step is to use a utility capable of undeleting a file.

There are several commercial utilities available which can undelete a file, such as *MacZap* or *MacTools*. Since *MacTools* comes with *Copy II Mac* and it is more readily available (and also half the price) I will demonstrate how to recover a file with it.

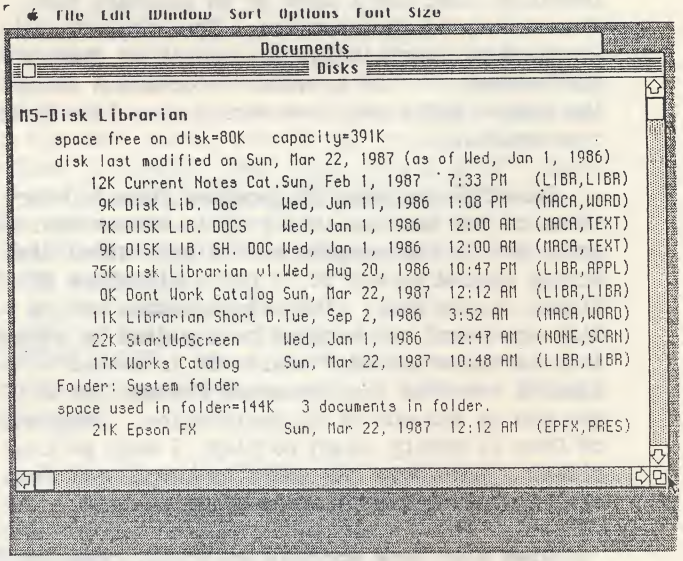
Now that you have backed up the offending disk, launch *MacTools* to start the recovery

process. Once *MacTools* is in place and the offending disk is selected, choose Undelete Files from the Disk pull-down menu. A window will appear which will request confirmation to recover files on the disk selected. Click on the OK button and the file recovery process will begin. When the process is complete the directory and the File Allocation Map will be restored for the files you have erased. All files recovered by this process will appear as RecoveredFileN in the directory of the disk. Next, the File Signature of each recovered file must be manually restored.

In order to restore the file signature of the file, click on the file to highlight it and select InfoEdit from the Files pull-down menu. A new window will open which will ask you for the File Name, File Type and File Creator as illustrated in figure 1. The File Name can be the original file name or anything you wish including the default of RecoveredFileN. The File Type and Creator are the more difficult information to type in. If the File Type and Creator are incorrect the file will be useless.



You can use FileInfo from the File pull-down menu of *MacTools* to see the File Type and Creator for similar files on the disk. A more more comprehensive way of finding this information is to routinely use an application by the name of the *Disk Librarian*. This application catalogs all the files on the disk and stores the File Type and Creator in the process. It's available on most information services or from the CURRENT NOTES ST-Magic Library (disk M5). An example of the catalog screen from Disk Librarian is shown in figure 2. Notice the File Type and Creator to the right hand side of each file. Once you have typed in the correct four-letter codes for the File Type and Creator, click on OK and exit MacTools. If all is well, the file should be usable and can now be transferred back to your original disk. Test it first before you transfer it.



Tips

To tell whether a file is locked, select the file by clicking on its icon once and moving the arrow curor to the filename. If the file is unlocked, the cursor will change to an I-beam shape. If it is locked, the arrow will remain as an arrow.

Be sure to Close any desk accessories you may have open before you quit an application or shutting down from the Finder. If you don't, you can damage your System file, the desk accessories' data files, or even the application you were work in when you caused the problem.

In *MacPaint*, you don't have to go to the Goodies pull down menu to get to the Show Page bar. Instead, to go to the Show Page quickly, simply double-click on the Grabber in the tool palette.

You can stretch an image in *MacPaint* by holding down the CONTROL key while dragging the edges of an image that has been selected with the rectangular selection tool. If you drag from one of the edges, one dimension of the image will be modified. If you drag from one of the corners, both of the dimensions will be modified.

Until September ....

POWER PANEL CONSOLES

Spikes, Surges, and Line Noise

Review by H. B. Monroe

Joe Waters wrote in CURRENT NOTES that his power control console was one of three of his most-valued additions to his computer set-up. This caused me to examine my computer desk and its arrangement. I found I had to reach under the table to turn on switches and I had never operated the computer without risking spike or surge damage. Surely some form of power control and protection was needed or at least desirable.

I had already decided that the power strip or the power box would not do. I was tired of reaching to the back of the disk drives and printer, or under the desk, to turn on the power. Further where would all the wires go? The power strip or powerbox would be more of the same inconvienence but with surge and spike protection added. The answer was the console type of power control. The power control console is designed to be placed under the monitor. The switches and lights are on the front, where your eye and hand can readily access them. The plug sockets are on the rear which keeps the cords and plugs out of the way and out of sight.

A DAK "Computer Power Controller" was ordered for $85.00 delivered. Upon arrival the console proved to be attractive. Some features are: built-in turntable, push-on/push-off switches and little window indicator lights all in an attractive metal cabinet. But unfortunately, with all of that Rita-Hayworth glamour, when attached to the computer system, Aux 1 and Aux 2 plugs would not provide any power, under any circumstances. So, the DAK was jettisoned back for a refund. Next a Tripp Lite "Isobar Command Console" was purchased from Crazy Bob's Computer Warehouse of Charlotte, NC for $99.00. This time the power console worked as it should. It has an attractive metal case and a nicely shaped, colorful front panel with lighted rocker switches.

The power control console is usually about 12 x 12 x 1.5 inches high and forms a solid foundation to support the monitor, switches, plugs and indicater lights. Most consoles have six electrical plug-in sockets, one of which is usually unprotected and not connected to the master switch. The master switch controls the remaining five plug-in sockets, each of which also has an individual control switch. In addition there are seven lights to indicate the on/off condition of the power controller switches and whether the protection system is operating correctly. The color of the lights may be, for instance, red for the master switch, green for indicating that the protection system is operating correctly, and amber for the five power plugs operating the computer.

In other systems the indicator lights may be in the form of lighted switches or small windows above each switch. Push-on/push-off switches and rocker switches are popular on power control consoles. At least one power command console has a turn table built into the bottom to allow the face of the console and the monitor to be easily turned to a position you would like.

Listed below are four power control consoles with some of the selling points listed for each one. This is not by any means a difinitive listing but is intended to be representative of the consoles available.

"DataShield" Power Center with surge protection $89.00. (5 acc switches, 6' line cord, Spike protection, Static protection, Surge protection, 15Amp rated current, Master switch with indicators, 200V peak clamping line.)

Computer Accessories Corp. "Power Director" List $169.95. (5 lighted switches and surge protected outlets, lighted master switch, Modem surge protector(RJ11), Shielded diskette storage compartment, 6000V surge capacity, Static disipator plate, UL approved.)

DAK "Computer Power Controller" $85.00 Delivered. (5 switched outlets, One master switch, One unswitched outlet, Non-glare status lights on all switches, Protects against voltage spikes and surges and filters out line noise, Swivel bottom to turn monitor from side to side.)

Tripp Lite The Power People "Isobar Command Console" $99.00, "Crazy Bobs" Computer Warehouse, Charlotte, NC. (Surge Suppression in a console format, One main on/off switch and five individual component switches, Protection present indicator light, Three duplex grounded receptacles on back panel. Four "Isobar" filtered, one double filtered and one unswitched, unfiltered outlet, Circuit breaker protected).

Does the power control panel really protect? I don't know; we have to trust the manufacturer and the engineers. Which one does the best job? You must judge that for yourself. I am happy with my "Isobar Command Console". Probably any that you can find at a fair price will do very well for you.

RELAX AND ENJOY

Arcade and Parlor Delights

(c) 1987 by Joe Kuffner

Whew! This heat! Its enough to force even the most courageous of naturalists into the comfort of their air-conditioned computer room. Certainly, I'm one of them! And, have I stumbled upon some great software to tell you about. Do you remember those late nights and paralyzed wrists of days gone by, from playing your favorite arcade games, like *Zaxxon* or *Galaxians*? I bet you thought they were over? Well, those days aren't gone if you get yourself Michtron's new release *GOLDRUNNER*. In fact, my wrists are so abused from playing this game, night after night, that I can barely type this article. Find out more about this game in the review that follows.

I'll also be covering some great new public domain software. In the parlor games category (these you can play while giving your wrists a break from *GOLDRUNNER*), are MileStone (*Mille Bornes*), *Pente*, and *Triple Yahtzee* (Wow!). In addition to this, there's a new public domain arcade game, *Azarian* (beta test version 0.87) that will knock your socks off. So get comfortable and read on!

Goldrunner

As an ex-space pirate, your mission is to dominate the Ringworlds of Triton by flying your one-man fighter and destroying the enemy. As the story goes ... if it moves shoot it, if its still blast it! In other words, an arcade game! And what an arcade game! This gem, programmed by Steve Bak, published by Microdeal, and distributed here in North America by MichTron has the most impressive scrolling graphics I have ever seen!

GOLDRUNNER is a game in which you must destroy stationary land targets, attacking defence forces while avoiding disrupter bombs and tall buildings (unquestionably the most difficult). At your disposal are an unlimited supply of wing lasers, auxiliary boosters and five units of armour (shields). As you fly through the Ringworlds (so named because continuous flight brings you back to where you start), land-based machinery are your primary targets. Destruction of these and some low-rise buildings reduces the energy level of the "ring" allowing you to exit the ring and enter a new one. Between rings are bonus rounds in which you can blast away, "Galaxians" style for some extra points. All this sounds simple enough, possibly the reason that the game is so much fun, but I assure you that the challenge ahead is not without some frustration.

You see, as you travel around the ring (in either direction), trying to destroy targets, there are endless waves of defensive forces, all carrying guided disrupter bombs. Although the defensive ships themselves cannot harm your craft, their maneuverable bombs cannot be destroyed. Instead they must be avoided. Not necessarily an easy task. As each bomb hits you, you lose craft maneuverability as well as booster power, until finally "the straw that broke the camel's back", a bomb strikes your defenseless craft. Did I mention that if you should lose your craft, you will start over at the beginning of that level? You will however, keep all of your accumulated points, but the Ringworld will have been rebuilt by the time your next fighter arrives. The secret ... avoid taking hits. And, for goodness sake, steer clear of those tall buildings. They cannot be destroyed.

The Ringworlds are a graphic three-dimensional masterpiece and the animation of flying over them is outstanding. The programmer has stretched your color monitor's resolution to the max for the setting. Portrayed in various shades of the same color, this playing surface displays some very unique landscape, including faces, ornate buildings, machinery and scenery that looks like large-scale circuit boards. Remember that this colony was built by machinery in space, so no trees or grass! The animation of your own craft adds to the three-dimensional effect. Your craft rolls through turns in a smooth deceleration, acceleration maneuver.

The defensive forces, however, are your typical computer game genre, as is your own space craft. You don't really notice this too much because you are desperately trying to destroy them! The right-hand portion of the screen is occupied by various status symbols, including icons representing energy level of the ring, ship ability, booster power as well as score, player and level, and armour level. The bonus rounds have a setting of outer space, with no landscape, just waves of fighters for your target practice.

How about the sound effects, you ask? Nothing less than a digitized sound track of music which, if you prefer, can be turned off. Personally, I found the sound assisted me in keeping

psyched up for the game. In addition to the music, you have a narrator (digitally encoded), who gives you moral support as you are playing and consoles you as you lose a ship. At the end of a game, it politely points out that you are dead. Wonderful effects!

Some excellent features programmed into the game include the ability to control your craft with a joystick, mouse or keyboard, interchangeably, or at the same time! In addition to this, you have the ability to pause play and save your high scores. I'm too embarrassed to tell you mine. Further there is a unique 50 Hz playing mode. A lot more goes on in this version (that's right, its a different version of the game) and I found it to be somewhat more difficult to get to the next level. And if that's not enough, you can also play two players (although keep this away from casual visitors -- they tend to hog the computer while giving you the old expression "just one more try"!).

I can only offer you a few strategy tips. Change direction often. This screws up the guided bombs. In addition, mentally map out the areas that are safe to use your boosters. More than once, I went into overdrive, straight into a building. Also, as you get into higher levels, slow down as you approach the buildings. The maze through the buildings gets tougher and tougher. And finally, as with most arcade games worth their salt, hold down the fire button at all times. Nasty defensive fighters are everywhere.

GOLDRUNNER is a sure-fire arcade game winner (pun intended). If you are an avid arcade game player who enjoys the challenge of a solid, well programmed shoot-em-up with a ruthless opponent, this game is most definitely for you. Enjoy.

One small point, however. This game is heavily copy-protected and I'm told that it may not run on the internal drive of newer 1040ST's (I use a 1 Meg 520ST with external drive so I am unable to confirm this first-hand). Check with your dealer to make sure that it loads before you buy. This program is definitely worth the try!

PD-OF-THE-MONTH

This past month has seen the release (or is that "discovery") of some excellent new public domain software. So much in fact, that I've chosen to award PD-of-the-Month to four of the best that I've seen. All of them should be available in your local club's library by the time you read this, or on the usual BBS's.

MileStone. This computer version of the popular Parker Brothers classic card game, *Mille Bornes* is programmed by none other than David Addison (of PD *Monopoly* fame). He has written the program in *GFA Basic* and then compiled it. Included in the game are all the features one would expect, including Coup Fourre's, flat tires, accidents, etc. For those not familiar with the game, the object is to achieve a distance of 1000 miles in a round before your computer opponent and score 5000 points to win a game.

One interesting feature of the game is that it is programmed without the use of cards. I think this gives the game the added speed required to make it even more fun to play than the original. In addition he has the scoring automated (although there is a tiny bug in that, if you should achieve exactly 5000 points, the goal for the game, it continues to play until one goes over 5000).

This is an exceptional one-player rendition of the game and is fully mouse and keyboard playable. It runs in low res only. The author has provided his address for your comments. There is no documentation file for the rules of the game, but because of the simplicity of the game, you should have no problem learning.

Pente. This one or two player version of the classic board game was programmed by Bill Shubert in *Alcyon C*. He has included nine levels of play, each successively more challenging (and time consuming). He has offered help screens for basic instructions but has not offered a complete documentation file on the intricate strategies of the game. (I don't blame him.) The object of the game is to get five stones in a row. Like most ancient Chinese games, the objective is simple but the game is very difficult to master.

The game runs only in color (medium or low res) and uses the mouse for player options as well as actual play. This program is shareware (donations of $25 are most welcome by the author) and the source code is available for $50.

Triple Yahtzee. This program is the computer version of Milton Bradley's sequel to the original game of *Yahtzee*, the dice game classic. All of the characteristics of the game are carefully reproduced in this version with a few notable additions. Up to six players may enjoy this game, which fully utilizes the mouse and keyboard. The program rolls the dice for you, offers you all of the possible scoring options and automatically keeps totals. It even saves the top 10 scores to disk! (My top score is 2,036 with 2 Yahtzees). As usual, it is assumed that you already know how to play the game. Even if you don't, it 'll only take a few minutes to learn.

(Continued on Page 45)

ST ART GALLERY

Data Compression Techniques

By David Mumford

This month, we're going to be starting another area in the CURRENT NOTES Library. In addition to TINY PICS, we're now going to have a CLIPART area. To start things out, we have a disk of Clipart converted from the Macintosh. The majority of these pictures were done using the Thunder Scanner and you'll find animals, sports and eye grabbers. Back in the normal picture area, you will find another disk of VEHICLES. These pictures are mainly aimed at Air vehicles, being mostly airplanes, helicopters, and shuttles, but there's also boats and cars too. The pictures signed RGF were originally drawn on an IBM PC clone using PC Paintbrush and were converted to the ST using Tinystuff 3.0. Both of these disks are MONOCHROME, but color monitor owners can use them. If you have some pictures you'd like to see on a disk in the CURRENT NOTES library, please send them in, we're always looking for nice pictures to add in.

We've seen that a picture in the computer's memory will always take the same amount of space, 32000 bytes. So how can programs such as Tiny and Degas Elite save them into files that are much smaller? This is accomplished by using some method of data compression on the 32000 byte area of the picture memory. Data compression can be accomplished in many ways. The three most popular types of data compression are Pattern Recognition, Subsetting, and Run Length Encoding. All three of these types are used in the ARC program used for compressing files for modem transfer or Archival/Backup purposes.

Pattern Recognition. In Pattern Recognition, the computer will go through the standard size file, searching for any patterns that are found frequently, and replace these patterns with a shorter 'token' that can then be used to recreate the original file later. In ARC, this type of compression is noted as 'Crunching' (the specific algorythm used by ARC is Lempel Zev Compression). This type of compression usually produces the best size savings.

Subsetting. In Subsetting, the computer again goes through the entire file, counting how many times each specific character occurs. In most cases, people don't use all the possible 256 characters, so by selecting only those that are used, each character may be represented by a smaller packet of information. In addition to this, the most frequently occuring characters are converted into the smallest packet size. ARC represents this type of compression by the phrase 'Squeezing' and uses the Huffman algorythm. In the Huffman algorythm, a table of the characters in the file is put, in the order of frequency, at the beginning of the file, and each character is represented by a number of bits, from 1 to 256, representing the frequency it occurs. This format only works well on files that don't have an even distribution of characters.

Run Length Encoding. In Run Length Encoding (RLE), the computer just searches for repetitious areas in the original file. In it's simplest form, a special character is inserted in the file that tells the computer that a run is upcoming, followed by the number of times to repeat it and the character itself. When working with pictures though, the most frequent way RLE is implemented is having a count of the number of repetitious, or unique data that follows the count.

The most frequent type of compression used for pictures is RLE, because it is the easiest to implement, and depending on how you look at the data in the computers' memory, provides extremely nice space savings for minimal time loss on the processing. If you compare the amount of time needed to load a normal Degas picture to the time needed to load a compressed Degas picture, you'll see that it does take more time to load a compressed picture because the computer has to actually look at each character and do special things when it comes across a run so that it can recreate the original picture.

Now as I mentioned earlier, RLE is looking for runs, so it isn't a good idea to go straight through screen memory because of the way the planes are mixed together. In order to find any serious amount of repetition, you have to go through the data a plane at a time. An interesting side affect of having the colors broken down into four planes with only one bit per plane is that in any one plane, eight of the 16 colors all look exactly the same to the computer. It's only when all four planes are taken together that the computer can tell the difference. This significantly increases the ability to create pictures that will compress well.

Degas Elite Compression. Degas Elite and Tiny are using the same type of compression, but

implementing it in two different ways. Degas Elite scans a picture starting in the upper left hand corner and traveling to the right, then down the picture. It works on eight pixels at a time (one byte at a time) using a byte to represent the count of the number of times to repeat the following byte, or the number of bytes that follow to copy to the picture. The control byte's sign (+/-) determines whether it's a repeat count, or a unique count. Each line is seperated into it's 4/2/1 seperate color planes, according to it's resolution, and Degas handles each line as a seperate little chunk. So no run's will ever be longer than the number of characters used by one plane from one line (40 bytes in color modes, or 80 characters in monochrome). Because of the limitation on the run length, the minimum size for the 32000 byte screen area is 1600/800 (color/mono) and the maximum size is 43,200/42,800 (color/mono). Degas' strong point is that checkerboard patterns will still compress well because they repeat when compared left to right.

Tiny Compression. Tiny on the other hand, starts in the upper left hand corner, and travels downward then to the right, treating each picture like a low res picture and assuming four planes. It works on 16 pixels at once (one word at a time) using a byte to represent the count of the number of times to repeat a word, or the number of words to copy directly to the screen. Again the sign determines whether the control byte is for a repeat (run) or unique. In addition, Tiny doesn't terminate a run until necessary, so a run could consist of the entire picture. When a Run or series of uniques becomes longer than 127 words long, the control character is set to a special value to tell the computer that it should use the next word as a longer count of the number of times to repeat the data word or the number of data words to copy. This means that a run could be 32000 characters long if the picture was all one color. Because of the difference in the sizes of the Data information and the Control information, any repetition at all in the picture will make the saved file smaller. The minimum size for the 32000 byte screen area would be five bytes in any resolution, and the maximum size would be 32003. Tiny's main strong point is the fact that the file won't get larger than the Neochrome equivalent, and the much larger size for the runs which helps make the files smaller.

In both these formats, careful organization of the color palette will result in much smaller files. Using the following table for color positioning will produce the best results.

Color	Best	Good	Bad	Worst
0	1,2,4,8	3,5,6,9,10,12	7,11,13,14	15
1	0,3,5,9	2,4,7,8,11,13	6,10,12,15	14
2	0,3,6,10	1,4,7,8,11,14	5,9,12,15	13
3	1,2,7,11	0,5,6,9,10,15	4,8,13,14	12
4	0,5,6,12	1,2,7,8,13,14	3,9,10,15	11
5	1,4,7,13	0,3,6,9,12,15	2,8,11,14	10
6	2,4,7,14	0,3,5,10,12,15	1,8,11,13	9
7	3,5,6,15	1,2,4,11,13,14	0,9,10,12	8
8	0,9,10,12	1,2,4,11,13,14	3,5,6,15	7
9	1,8,11,13	0,3,5,10,12,15	2,4,7,14	6
10	2,8,11,14	0,3,6,9,12,15	1,4,7,13	5
11	3,9,10,15	1,2,7,8,13,14	0,5,6,12	4
12	4,8,13,14	0,5,6,9,10,15	1,2,7,11	3
13	5,9,12,15	1,4,7,8,11,14	0,3,6,10	2
14	6,10,12,15	2,4,7,8,11,13	0,3,5,9	1
15	7,11,13,14	3,5,6,9,10,12	1,2,4,8	0

* * * * * * * * * * * * * * * *

RELAX AND ENJOY (Continued)

It was programmed in *GFA Basic*, and compiled by Ysengrin Wolf. It runs in medium-res color only. This is a must-have item for everyone's ST PD library. Source code is provided.

Azarian. This commercial PD release (Pre-Release Beta Version 0.87) is from Synergy Development, a German programming house, and programmed by David Thomas Steward. The scenario is outer space. Your mission is destroy everything that moves (aka arcade game). Because this is a pre-release public domain program, there are several limitations (to entice you to buy the game when its finally released). However, it is fun to play, and free, too! By the way, you might want to pick up a PointMaster Fire Control for this game. This device will allow you to simply hold the joystick button down for continuous fire.

Well, that covers the best from this month. Have a good summer, and we'll be computing at you in the fall. Computers are fun, so, Relax and Enjoy.

GOING ONLINE

Creating 'DO' Files in FLASH

By Ed Seward

This is another of the columns dealing with the use and creation of Flash files. Before I go any further let me mention a few of my guidelines for creating 'DO' files.

1) Whenever possible CAPTURE the process for which you want to create a 'DO' file.

2) Don't forget that the 'WA' command is case sensitive.

3) When building an auto-logon 'DO' file, include the commands to completely handle the configuration of terminal for that system. Besides saving the time it takes for you to click on the various items, it makes it easier to add one 'DO' file to another.

Both the GEnie and CompuServe ST SIGs have a 'DO' file available to scan the file areas. Also available on both services is a file called "FLASHD.ARC". This file contains a program that will construct a 'DO' file to download a list of selected files from the designated service. I strongly recommend all three of the above files.

What I am going to cover this time is a 'DO' file to log onto a FoReM ST BBS (version 1.10 or later), scan the message bases of interest to you and then to scan the first file folder.

Forem ST BBS Scan

If you already have version 1.11 or later of *Flash* then you have probably seen the sample 'DO' file for logging on to a FoReM ST BBS. (The version number of *Flash* is on the fourth Help screen in the box.)

I use two variations of the same 'DO' file with two different dial directory entries for the WAACE ST BBS. One of these, WAACE.DO, logs on in VT52 mode and skips the Vidtex graphics that are set up for *Flash* users. The other 'DO' file, WAACEVID.DO, logs on in Vidtex mode and tells the BBS Vidtex is supported. The basic 'DO' file is:

```
>RT|
>MO AT|
>XM C|
>XM Z|
>PA NO|
>SB 1|
>DU FU|
>AS 3|
>AS /)|
>** if running from a hard disk then the
>** pause below should be 2 sec
>PA 1|
||
>WA Return|
||
>WA tex|
N|
>WA name)>|
>LO FK WAACE.DEF|
   your name or number goes here|
>WA word)>|
   your password goes here|
>WA Quit)>|
Q|
>WA Command>|
>** the line above waits for the main
>** BBS prompt which varies
>** from BBS to BBS
M/A
>CA ON|
>WA Read/Scan messages Software Review|
>WA Menu|
>WA Menu|
>** 'Software Review' is the name of
>** the last message base on|
>** the WAACE ST BBS, change this for each BBS|
Q|
>WA Command>|
F/1/s/n|
```

Many will ask why include all those configuration commands in the file. There are two alternatives to this. One would be to make minor changes in configuration needed for the various systems that one calls. That would be ignoring the ease and power of the 'DO' files. The other alternative would be to load a different 'CNF' (system configuration file) for the various setups I use. In that case the line

```
>LO CO WAACE.CNF|
```

would load in the complete configuration I have setup for the WAACE BBS.

The reason for automating the configuration of the system at log-on is to do it the fast and easy way. *Flash* and the 'DO' files will handle the system configuration and the automatic log-on regardless of which system or sequence of systems are accessed. By including configuration system in the 'DO' files or by having them load the proper 'CNF' file, all I have to do is click on the desired directory entry and let it rip.

Function Key Definition

One should notice that the function key definition file is loaded while the BBS is waiting for a response - in this case one's name. By loading or saving files at such times one is assured of not having to scan a fast moving screen after the disk access is done. Another thing to note is that I keep two function keys standardized in all my function key 'DEF' files with the command

```
>ED FK|
```

Thus, with all my function key files [Shift-F10] displays the current function keys. The last thing I'll point out about the function keys is [Shift-F9] will display a help file for a service or a message where no help is available.

```
>VI VT.HLP|
>TY NO HELP available|
```

With BBS' it is usually a list of VT52 ESC sequences; with GENIE it is a list of various Roundtables and Bulletin Board Info for the Michtron and ST Roundtables (SIGs). The function key DEF file I use with the WAACE ST BBS is:

```
 1                  Ed Seward|
 2  o/2/s/n|
 3  o/3/s/n|
 4  o/4/s/n|
 5  o/5/s/n|
 6  o/6/s/n|
 7  o/7/s/n|
 8  o/8/s/n|
 9  o/9/s/n|
10  o/10/s/n|
11  o/11/s/n|
12  o/12/s/n|
13  o/13/s/n|
14  o/14/s/n|
15  e/r/t|
16  off|>WA NO CARRIER|>DI CIS|
17  off|>WA NO CARRIER|>DI DELPHI|
18  off|>WA NO CARRIER|>DI GENIE|
19  >VI VT52.HLP|
20  >ED FK|
```

On the Wires

Intersect has released a terminal program for the ST. ANTIC is working on *Flash* version 2.0. The major changes will include open architecture, more emulation, better scripting, and more that I couldn't be told yet. From the way I read the annoucement on *Flash* version 1.12, there is no major changes from *Flash* 1.11; as such I would not recommend upgrading until 2.0 comes out.

BASEBALL COMES TO THE ATARI ST

Championship Baseball, Hardball, and Micro League Baseball

Review by Roger Abram

Although all three have two-player modes, the games in this article are being reviewed under the perspective of one baseball fan playing against the computer. My daughters (ages 3 & 5) are just now cutting their teeth on *Tonk In The Land of Buddy-Bots* and *Kids On Keys*, and are a few years away from maturing into challenging competitors. I mention that because one game, *Championship Baseball*, could actually be fun if played against anybody other than the computer.

Championship Baseball

I don't know who beta-tested this game for Gamestar (Activision), but whatever group was responsible for giving the o.k. to release this program in its current form should have their joysticks taken away! It's just too easy to beat the computer. I'm not talking about winning by a few runs either. How does 54 to 3 sound? That would be a blowout even in football numbers. Considering that was the score in the 6th inning of the second game I played on *Championship Baseball*, makes me lose faith in a company that had previously released an exceptional basketball program, *Championship Basketball - Two on Two*.

Gamestar released a baseball game for the Atari 8-bit several years ago and the play mechanics in the ST version are the same and some enhancements have been added. The main differences between the two are the ability to form and name your own team and players, league play, player substitutions, and a split screen with a view of the pitcher, batter, and catcher from high in the right field bleachers, and a view from behind the plate showing the batter and the pitcher delivering the ball. When the ball is hit, the full screen switches to the one from the right field bleachers. And yet, with all these enhancements, the game is less enjoyable than the original 8-bit version because there is absolutely no challenge at all.

Every single one of your players, regardless of speed rating, can steal second base if the runner is set in motion the instant the pitcher begins his delivery. Gamestar needs to speed up the throw from home to second in order to alleviate this shortcoming. And if your batter hits a pop-up fly to the outfield while your first base runner is going, the computer will only backup the runner to second base if he rounds it before the pop-up fly is caught.

When you're at bat, you have the option of watching the ball approach from either the view in the bleachers or the behind-the-plate perspective. The view from the bleachers is the easiest one to watch since you can immediately tell if a ball is too high or too low. It's also easier to time your swing. The behind-the-plate view is harder to master and it's only at the last second where you can determine whether or not you should swing. The game, however, does have a batting practice mode where you can determine which view you prefer.

Drafting your unbeatable team is easy. You select one of two available players for each position and give him a name of your choosing. Players are rated in terms of batting, catching, running, and throwing. Ratings range from 1 to 3 and all four categories have to add up to 8. Players are also categorized by their batting style -- liner or slugger. Pitchers are rated in three categories -- speed, control, and stamina. It all sounds pretty good, but I could find no discernible difference in the performance of any player based on his stats. Your pitcher is just as apt to hit a grand slam as is your highest rated slugger.

In League Play, you pick which league you want to compete in -- South, North, East, West. The South is the easiest, the West is the toughest. You play all five teams in your league once and then the league winner advances to the one-game playoff against the division paired with yours. From there it's on to a two out of three championship series against the pennant winner from the other pair of divisions.

I don't attest to being an expert with the joystick and going up against the computer in most games requires a certain amount of experimentation and practice to achieve a level of competence. Gamestar needs to take another look at *Championship Baseball* and make some much needed changes in order to make this program worthwhile buying. True, the game could be fun if played against another person, but the whole idea of league play, playoffs, and championship series forces you into playing against the computer. The computer never steals bases, never takes chances, and never hits as well as a human player. As the game stands now, stay away from it.

Hardball

HardBall, by Accolade, captures the true spirit of the pitcher vs. batter relationship found in real baseball. The main view in this program is from around second base with the pitcher, batter, catcher, and umpire all in front of you. In the background are fans in the bleachers and a player leaning against the dugout wall blowing bubbles with his chewing gum. Graphically, this screen is excellent. All movement is expertly animated -- from the wind-up and delivery of the pitcher, to the raising of the umpire's right hand to signify a strike. Just above the umpire, the word STRIKE appears in a cartoon balloon in such a fashion that you'd expect everyone in the stadium to hear the call. In the right corner of the main screen is a skycam view of the baseball diamond. This is so that you and the opposing team can keep an eye on any on-base runners.

Upon loading the game, you can choose either the All Stars team or the Champs. Both teams have predetermined players but you can change your lineup and batting order to your liking. The batting average, at bats, home runs, runs batted in, and stolen bases are given for each player. You also choose if you want to be the home or visiting team to see who bats first and whether or not you want to allow designated hitters.

This really is a pitcher - batter duel and each team has several pitchers on the roster with a variety of pitches at his disposal. Each pitcher has up to four pitches to select from when throwing to the plate. Among the pitches are fastball, offspeed, screwball, change-up, curve, slider, and sinker. Some pitchers can also deliver an extra fast fastball that'll make your head spin! Selection of the pitch is determined by examining the available pitches shown at the bottom left of the screen, moving the joystick in the direction for the pitch you want, pressing the joystick button to lock-in the pitch, positioning the catcher's glove where you want the ball to arrive, and then pressing the joystick button once more to finalize the catcher's mitt. If it sounds tedious, it isn't. Two player games must be played with joysticks, but a mouse or joystick can be used when up against the computer. Although it's easier to pitch using the mouse, it is harder controlling your defensive players on the field when they run towards the ball.

When a ball is hit by the batter the screen switches to either the right or left of the pitcher from a behind-the-plate perspective. From this angle you can see home plate, first or third base, right or left outfield, and the pitcher. The player most likely to be able to make a play on the ball is shown flashing and you need to act fast in order to get to the ball. For example, if a ball is hit towards first you'll see the first baseman flashing. If he isn't moved quickly enough to catch the ball, the ball rolls into the outfield and then the outfielder will begin to flash. The overhead skycam view is now at the lower left of your screen and depending on whether or not runners are advancing, you need to decide to which base the outfielder will throw the ball when he gets it.

Since the game's foundation is batting and pitching, some of the defensive aspects of baseball are handled less than perfectly. If a player on the opposing team hits a fly ball to the outfield, all you have to do is move your outfielder anywhere near the trajectory of the ball to have it count as an out. This is also true when fielding balls in the infield.

HardBall is full of the familiar organ chants found at real ballparks when bases are loaded or when a runner may be in scoring position. The one feature that I wish *HardBall* had that was included with *Championship Baseball* is league play, playoffs, and a championship series. Still, *HardBall* is a fun, challenging game with a typical score being 6 to 2. The computer plays an aggressive game each time and you need to stay on your toes in order to survive.

Micro League Baseball

This program has been around for several years for the Atari 8-bit and has been considerably enhanced for its debut on the ST. New features include park/stadium factors, injuries, arguments with umpires, ejections, pitcher stamina, bullpen status, more fielding ratings, quick play option, rain delays, power outages in dome stadiums, better graphics and music, optional mouse control, and built-in box score and stat compiler. Micro League Sports Association has taken a great game and made it even better.

Of all the three games reviewed here, MLB is the only one that is not an arcade simulation of baseball. The game disk comes with 25 teams and you pick one to manage and either go up against a friend or play against the computer. The program uses actual statistics on each player to help determine the outcome of the game. As manager, you play an important role in managing your team's assets to their fullest potential. You decide on the batting lineup, who's going to pitch, when to bring in a reliever, when to pinch hit, and many other factors. Before sending a runner to steal second, it's your job to check his stats to make sure he's done it before!

I always tend to manage the 1983 Orioles and let the computer control teams like the 1927 Yankees or the 1982 Cardinals. Just before preparing this review, the Orioles won by 3 over the Yankees but lost miserably to the Cards as Ripken and Murray went hitless against Joaquin Andujar. The Babe didn't have a good day against Boddicker either. Only one home run.

What I like most about this game is the feeling that you actually are managing these real life players. When the Babe steps up to the plate and you have to select which pitch to throw (fastball, curveball, slider, change-up or specialty), a wave of impending doom comes over you. Just press the 9 key to view his stats and you'll know why: .356 average, 60 home runs, and 164 R.B.I.'s.

After selecting the teams that will play, you select the pitchers and players/lineup for your team and also for the computer. All of the teams on the disk have default lineups and pitchers, so if you're in a hurry to get started you can just press the escape key to accept the stored lineup. You also decide whether or not to allow designated hitters.

If you're batting with the bases empty, offensively you have only two choices: swing away or bunt. Each option has a numbered key associated with it and you make your selection. The pitcher will then throw the pitch and you will see the action unfold. If your man hits a pop fly, you'll see your batter heading for first, the ball heading for the outfield, and a player running to make the catch. Once you get a man on base, your offensive options become more numerous. In addition to the first two, you can: swing away with aggressive or safe running, steal a base, sacrifice bunt, have a pinch runner, and hit and run where a runner breaks with the pitch.

On defense, you control the type of pitch and can have a pitchout in case of a steal, bring the corners in to thwart an attempted bunt, bring the infield in, and intentionally walk a batter to avoid him or set up a potential force or doubleplay. If your pitcher starts giving up too many hits, you can visit the mound to calm him down. At the same time you might want to warmup a pitcher in the bullpen.

All of the action is played out on the screen and is controlled by the computer. Above centerfield is a box which describes in text all the events taking place on the diamond. Players are announced as they make plays, score runs, and more. When a player gets into an argument with the ump, it's here where you can follow the verbal exchange. It's like having your own private radio announcer.

The box score and stat compiler, which were available separately for the 8-bit version, are included here. At the end of each game you can page through five screens of statistics based on the performance of each player. The stats include hits, at bats, runs, runs batted in, strike-outs, walks, stolen bases, sacrifice flys/bunts, home runs, earned run averages, and more. You can then compile these stats on the stat compiler disk and build up new statistics for a team. After the team has compiled enough stats, you can use the new stats for the team instead of the ones on the game disk.

The game disk comes with such teams as the 1986 American and National League All-Stars, 1983 Orioles, 1982 Brewers, 1980 KC Royals and Astros, 1979 Pirates, 1927, 1961, and 1978 Yankees, 1969 Mets, 1955 Senators, 1975 Red Sox, and others. Already available for MLB fans are the 1985 and 1986 season disks at $19.95. Although I haven't seen it, the General Manager and Owner program is supposed to be available at $29.95. This one lets you create your own teams and draft players.

Conclusion

Both *HardBall* and *Micro League Baseball* take different approaches to the game and if you're considering buying one of them, you'll have to determine which you would rather have: a truly fun arcade game or an impressive strategy program that offers true to life performances from actual baseball teams. If you can't make up your mind, get them both! You won't regret it. Just stay away from *Championship Baseball*, it's a strikeout.

HardBall is available from Accolade, 20813 Stevens Creek Boulevard, Cupertino, CA 95014, (408) 446-5757. List price is $39.95. *Micro League Baseball* can be bought from Micro League Sports Association, 2201 Drummond Plaza, Newark, DE 19711, (302) 368-9990. List price is $59.95. *Championship Baseball* is made by Gamestar (Activision), 2350 Bayshore Parkway, Mountain View, CA 94043, (415) 940-6044. Suggested retail price is $39.95.

GOLDEN PATH

Is It Real Gold Or Just A Yellow Brick Road?

Review by Bill Moes

Puzzles, animated characters, martial arts, a maze, the mystery and the scroll, a ring of great power, goblins, mortal danger: *Golden Path.*

With no keyboard entry and using only the ST's mouse, you'll travel across screens of challenges and mystery. Your father's kingdom, lost at his death, is the prize in this graphics trek through ancient China.

The Message and Its Telling. The illustrations are clearly presented. Across the upper two-thirds of the screen, a scene illustrating your location. Your monk's animated likeness follows the Chinese symbol-shaped cursor. Below the game screen is a vine, indicating your strength and life.

The lowest part of the screen is sectioned (L to R) into a Book of Knowledge, empty "pockets" for four items you may have in your inventory, and a small version of the playing screen which includes lines showing the paths you may follow across the main screen.

A click on the Book results in the playing screen being replaced by a text description of the scene, with key words highlighted in bright yellow for easy and quick note. A click on a pocketed item places that item in the monk's on-screen possession where it may be used or dropped. Click on the small version of the screen and notes on your progress (or score) replaces the main screen.

Your Character and His Travails. The monk is moved by placing the cursor ahead and pressing the left button. Many of the 37 location screens have both upper and lower paths which may be easily chosen by placing the cursor higher or lower on the screen before pressing the button. You'll move on to the next screen by placing the cursor at the left or right screen edge and holding the button press.

As you encounter dangers from characters such as the goblins who attack if you stay in one place too long, you can defend yourself with a punch or kick by using the right button with the cursor either in front of or on the monk. Dangers from other most unpleasant types may require thought and care and swiftness.

The monk screams an appropriate "yeaahh" as he makes his combat moves. Digitized sounds surprise you a time or two elsewhere, as well.

Picking up items during your travels is done by moving the monk near that item and pressing the left button. Your character bends down and grasp the object. It may then be put into an available pocket. Holding an item is possible, although not always wise. Also, it's possible to throw an item you hold by moving the cursor to the target and clicking the right button. By placing the cursor at the left or right screen edge, you can throw an item into the adjacent scene.

The vine of life, shown below the main playing screen, needs to be replenished during the quest. This may be done by solving puzzles or with food. If, after dying, you choose to restart the game at the current position (a choice most players make), your vine withers at an increased rate and goblins attack with increased numbers. You do, though, retain all items and points you've earned. There is no confirmation on your choice.

Using an item in your inventory to solve a puzzle is simplicity. When you have the item in your possession, after retrieving it from a pocket if necessary, click on the right button. A question mark (?) appears above the monk. An exclamation mark (!) replaces it if it's possible for the monk to use the item at that place. That's all there is to it! Remember, however, that you may use an item in one situation only to find that its real need was for another challenge. And some items are best not used, but simply dropped at the appropriate location.

It's important to occasionally make plans for your own defense. If, for example, you are carrying an item and meet an enemy, clicking on the right button results in either using or throwing the carried item, not in combat moves. That's not always the best way to prolong your lifespan.

Generally, the mouse use is quite smooth and logical. After clicking to close the Book of Knowledge, the cursor placement does seem to be a small problem. The cursor cannot be moved until the Book is completely closed and I did not always have time to move the cursor from the closed Book over to the monk before he became the victim of some nastiness.

Pictures and Clues. The graphics and animation are extremely well-done with colorful detail, style, and subtlety. A sense of depth is shown as the characters travel behind or in front of screen objects (and in some cases, a little of

each). The characters generally move with smoothness and the scene-changes are quickly accomplished. The oriental-style music seems appropriate and that music changes for different effects during play.

A few clues are offered within the game by a Book of Law. This is a screen object which may be picked up and read, with the large style text then shown when you click on the Book of Knowledge. The challenge of the game lies in the range of moderate difficulty. Information listed on the game's box states that *Golden Path* includes "20 interactive characters, 40 'life' situations, 50 puzzles."

Games may be paused by pressing <ESC>, although this fact isn't mentioned anywhere in the documentation. After that press, it's possible to restart or continue your game. The documentation is a 34-page booklet which includes a short story as game background along with ST-specific instructions. The two-disk package ($44.95) is auto loading and copy protected.

Fatal Flaw or Unique Challenge?. *Golden Path*, surprisingly, does not include an option to save a game. A spokesman for Firebird, the American distributor, stated that this was to encourage speed in solving the game. The spokesman mentioned 22 minutes as currently the best time and stated that most players could get through the game in 30 to 40 minutes after knowing the puzzle solutions. A hint sheet should now be available from Firebird to help you.

The adventure is a jigsaw-style effort, one in which you're able to journey to most locations at any time, piecing the puzzle bits together and watching the whole story gradually focus. For this reason, the game-save is not as important in *Golden Path* as it would be in a linear adventure (such as Infocom's *Hitchhiker's Guide*) in which you usually need to solve one puzzle before you're able to continue on.

Ah! So.... I see the lack of a save-game as a shortcoming to be noted. The all-mouse and no-text direction is also unusual and I found that enjoyable.

Golden Path is an entertaining adventure with an interesting storyline. The touches of humor, the animated surprises, the excellent graphics, and the challenging but not impossible puzzles: they all combine to form a colorful journey.

Perhaps you will choose to travel those 100 steps down a golden path of Chinese mystery and mythology. You'll battle the wicked and the dangerous and the cunning. And you'll solve the perplexing. Your father's lost kingdom: that is the prize to *win*, if not to *save*.

GOLDEN PATH, PART 2

From the Eyes of a 14-Year-Old

Review by Stephanie Moes

I wandered through ancient China: by waterfalls, caves, and snow-covered castles. I quickly found myself solving puzzles, some quite easy and others rather difficult. What to give to the starving man? How do I help the baby dragon? *Golden Path* is an exciting adventure game, filled with stunning graphics.

Having played Infocom and other adventure games before, I felt that using just the mouse, while fun, also had some drawbacks. Picking up objects is easy enough, but what to do when you have it? Just two choices: drop it or use it. And you'll find that where you think is the logical place to use an object often isn't what the computer has in mind.

One thing I especially like about Infocom adventures is the ability to talk to some of the other characters in the game. In *Golden Path* you can ask the characters no questions and anything they have to say is found simply by clicking the mouse on the Book of Knowledge in the lower left. Also, the puzzles are quite a lot different. Most other adventure games force you to sit down and spend time searching for the right words and combinations to solve puzzles. Most of *Golden Path*'s puzzles are: find the right object and take it to the right place or give it to the right person and you're all set. But, then again, in most other adventure games you won't be able to see yourself kick a goblin out of your way or have the enjoyment of watching evil dragons fall dead or hedgehogs crawl around the screens.

Things I liked about *Golden Path* were the graphics, music, and the way the characters were able to move around. You'll have friends following you, a monkey jumping around, and, of course, those wonderful goblins ready to take some leaves off your vine if you decide to stay too long in one place.

You'll find that *Golden Path* is not like most adventure games, but it's unique and it's very challenging. It is the type of adventure game which people who hate other adventure games may find themselves loving.

Golden Path is, indeed, quite different, lots of fun, and as mind-puzzling as many others. So, for any of you brave-hearted people willing to accept the challenge and find the *Golden Path*, Best of Luck!

[Firebird, Inc., P. O. Box 49, Ramsey, NJ 07446, phone: (201) 444-5700]

ST WRITER TRICKS

Fine Tuning Two-Column Output

By Joe Waters

As most *ST Writer* users are aware, output may be formatted for two columns. Using a single font, double columns work reasonably well. However, if you attempt to mix fonts (switching from compressed to pica and back, for example), your final output usually doesn't look anything like what you intended. In this little tutorial, then, I will try and explain how *ST Writer* formats columns and how you can work around its shortcomings to produce the output you want.

Margin Math

Margins in *ST Writer* are set using a control character and a paramater that represents the character count. Let me use an example to explain. If you are using an elite font (^G8), characters are printed at 12 characters per inch (cpi). For a standard 8.5 x 11 inch page, a maximum of 102 characters (8.5 x 12) can fit across the page. A one-inch margin on the left and right side of the page would require a margin of 12 characters (one inch) on the sides with 78 characters (6.5 inches worth) left in the center for the text. Your left margin would be set by ^L12 (note: I am using the symbol ^ to represent the [Control] key). The right margin would be ^R90. (Where did the 90 come from? Subtract 12 from 102 or add 78 to 12.)

With the above settings, all of your text would appear in the center 6.5 inches of the page. If you wanted to switch to a different font size, say pica at 10 cpi, you would have to reset your margins since the margins are measured in characters not in inches. With a pica font, only 85 characters would fit on that page (8.5 x 10) and, with one-inch margins on the left and right, the margin settings would be ^L10 and ^R75. A maximum of 65 characters would then fit on a line. For compressed mode, (assume 17 cpi), you would have to set your margins at ^L17 and ^R128 and you could print 111 characters are on a line. If you carefully change your left and right margin when you change your font size, the margins of your document will stay lined up even though your font is changing.

In single column mode, by switching your margins you can, indeed, switch fonts and still maintain even margins. (You still can't, however, switch fonts right in the middle of a sentence.) How about double column mode.?

Margins With Two Columns

To indicate two columns, you specify the left and right margins of both the left and right column. The margins for the left column are set with ^L and ^R while the margins for the right column are set with ^M and ^N. Assume you want to print two 3-inch columns with a half-inch gap inbetween. Using a pica font, you could get 30 characters in a column and your margins would be ^L10 ^R40 ^M45 ^N75. In elite you could fit 36 characters in a column. The margins would be specified by ^L12 ^R48 ^M54 ^N90.

Now we get to the heart of the problem. Suppose we have two columns set up in elite (^G8). We want to use a section title in pica (^G0) to make it stand out more. However, when we do this, we find the characters in the right-hand column are shifted over too far thus messing up the two-column output. What happened?

The Problem

Remember that *ST Writer* does all of its counting in characters. When you specify the limits for a page, *ST Writer* uses that information to completely format a page in memory. In two-column mode, it writes the first column to memory and then adds the second column. When both columns are on the page in memory, each line is then sent to the printer. When writing to its "memory" page for our two-column elite example, *ST Writer* will see that 12 blank characters are followed by 36 characters for column one, 6 characters for the gap, and 36 characters for column two. If we stick in a 10-character subtitle switching to pica at the beginning (^G0) and back to elite at the end (^G8) of our subtitle, *ST Writer* counts that as 10 characters. It ignores all control characters and their parameters since it knows these are printer controls and not characters in the text. *ST Writer* then adds another 26 blanks to fill up the rest of column one on that line.

When it comes time to send that line to the printer, *ST Writer* passes the ^G0 on to the printer, sends the 10-character expression, passes the ^G8 on to the printer, sends 26 blanks, the 6-character gap, and the text in column two. What happend at the printer? It received the ^G0 code and switched to 10 cpi, it printed 10 characters (at 10 cpi), received the ^G8 code to switch back to 12 cpi, and then

printed 26 blanks (at 12 cpi). The 10 characters took up one inch. The remaining 26 blanks took up 2 and 1/6 inches. Whoops, column one went 1/6 of an inch too far. Column two, therefore, is shifted to the right by 1/6 of an inch or 2 characters in elite mode. We told *ST Writer* we wanted 36 characters in a column and then we cheated by sticking in a code to the printer telling it to print the characters further apart. The result: character spacing gets messed up.

The Solution

How do we fix this? If we switch to pica and send 5 characters to the printer, we want *ST Writer* to actually count 6 characters. (The amount of physical line space used up in 5 characters of pica is the same as in 6 characters of elite.) If we could only type a character that *ST Writer* counts but the printer igonres, we would be in business. But we can! All we have to do is use the *ST Writer* printer configuration file to define one of the keys on the keyboard as a null character. *ST Writer* will still count it, but the printer will ignore it. I had to pick a character I don't normally use. I chose the accent mark located to the right of the equal sign on the keyboard. Checking an ASCII conversion table, I found that the accent mark was listed as hex 60, decimal 96. In the *ST Writer* CONFIG.TXT file, I changed the '60' in the character table to an '00'. Therefore, whenever *ST Writer* encountered an accent mark (hex 60), it would convert it to a null character (hex 00) before sending it on to the printer.

After making that change, saving CONFIG.TXT, and running the CONFIG.TOS program, I had a new printer driver for my *ST Writer*. Everytime I typed an accent mark, *ST Writer* would count that as a character, but the printer would receive it as a null character and ignore it. Now, it was a simple matter to use pica subtitles in the midst of elite two-column text. For every five characters in my subtitle, I would send an accent mark. (If my subtitle didn't have an even multiple of 5, I would add enough blanks to make it come out even.) For example, the subtitle "INTRODUCTION" would be written like this:

```
^G0-INTRODUCTION   '''^G8-[Return]
```

The subtitle "INTRODUCTION" has 12 characters. I add three blanks to make it 15 characters (3 groups of 5) and then send 3 accent marks. Finally, I switch back to 12 cpi. [Note, since my accent mark is still being interpretted as a null character, I used three apostrophes in the example above.] *ST Writer* thinks it sent a total of 18 characters. At 12 cpi, that's 1.5 inches. The printer received 18 characters, but ignored the last three. The fifteen characters it printed, at 10 cpi, took up 1.5 inches. Both *ST Writer* and the printer are now in accord. The second column will line up exactly.

What I use in CURRENT NOTES is based on this principle. Normal text is printed at 15 cpi. Subtitles are printed at 10 cpi. Everytime I send 10 characters in a subtitle, I have to trick *ST Writer* into thinking I sent 15. That is a ratio of 2 to 3, i.e. for every two characters in the subtitle, I add a null character. If my subtitle is 12 characters, I add 6 nulls; if 20 characters, I add 10 nulls.

There is one other change in my subtitles: they are printed in a different font. I can download fonts to my QMS Kiss laser printer. To change fonts, I send the printer code: <ESC>[NNNNs where "NNNN" is a particular font number. How do I get *ST Writer* to send this code? Once again, I make use of the printer configuration file. I use almost everything in there: pica, elite, compressed, underline, bold, italics. However, I almost never need to use superscript or subscript. Therefore, I embedded the necessary printer control codes to switch to a larger font in the "superscript on" section. The code to switch back to standard prestige elite font was put in the "superscript off" section. Therefore, my subtitles follow the following format: start with ^G0 (to switch to 10 cpi), superscript on (to switch to the appropriate font), the text of the subtitle followed by half as many null characters, superscript off (to switch back to prestige elite), and finally, ^G2 (to switch back to compressed which I have defined to be 15 cpi). And there you have it, two columns with mixed fonts.

Actually, I only just tried sending ^G0 and ^G2 to do the switching and they worked like a charm since both were defined to produce 10 and 15 cpi respectively. Previously, I had sent the actual printer control codes to tell a QUME to switch character spacing. The sequence "<ESC>E12" switches to 10 cpi while "<ESC>E08" switches back to 15 cpi. These sequences are, of course, printer dependent. How did I send the <ESC> code? Using ^O in *ST Writer* doesn't work. All the ^O's wind up being sent at the beginning of a page and cannot, therefore, be used to change things in the body of the text. Have you figured it out yet? That's right. Just use the character translation table in the CONFIG.TXT file to redefine one of the characters to be decimal 27, the escape code. I used the pound sign for this. Whenever I typed a pound sign, the printer received the escape code. Using this trick, I can now send an escape sequence to the printer anywhere in the document. There is one drawback, however. If I send, for example, a four-character sequence started by the "pound" sign, *ST Writer* thinks all of those characters count when, in fact, the printer is interpreting them as printer control codes. But that's another story.....

THE SHELL GAME

Why Play It?

By John Barnes

CURRENT NOTES readers have been exposed to reviews of "Shell" programs and isolated references to these programs appear in other articles. Beckenmeyer Development Tools' *Micro-C Shell*, Michtron's *MS-DOS Shell*, and QMI's *DO-IT!* are the best known commercial products. What are these programs for, when should they be used, and when should they be avoided? What could be done to make them better?

This article is intended as an introduction to the shell game for "generic" users of the ST. More sophisticated users will find this material useful as an introduction to a future side-by-side comparison.

What Are They?

Shell programs for the Atari ST and similar computers are intended to replace the "point and click" interactions with TOS with a user interface that looks like something else. In a certain sense they surround the operating system with a covering, like the shell on a peanut. The shells are simply programs that translate input supplied by the user into commands to the computer's operating system. They bypass the usual mechanisms that the operating system provides for this function.

In the case of the *MS-DOS Shell* the "something else" that the shell is supposed to look like is MS-DOS, the most widely used operating system for IBM PC's and compatibles. *Micro-C Shell* tries to look like UNIX, an operating system often found on minicomputers and mainframes.

The shell programs, however, are NOT operating systems in their own right. It is important to remember this because some of their shortcomings are really shortcomings in the operating system that they are hooking into.

Shell programs are sometimes referred to as CLI's or Command Line Interpreters, a name that I first encountered in the minicomputer world. The CLI is that component of the computer's operating system that parses a command line supplied by the user to see what action the computer must take as a result. GEMDOS on the ST tries to replace the command line with an allegedly simpler technique of "pointing and clicking" to items on menus. On the ST, GEMDOS takes the place of the CLI. A Shell program must intercept this process and substitute itself for the built-in CLI. In the MS-DOS world, GEM Windows takes the place of the CLI on the disk that you boot from.

How Are They Used?

The "command line" is the fundamental unit of interaction between the user and shell programs. A typical command line includes a command operator (which can be thought of as a "verb") and (usually) one or more operands. Sometimes there are additional symbols used as modifiers.

Some trivial examples of command lines which will work in *MS-DOS Shell* and *DO-IT!* are:

```
(1) TIME
(2) TIME 09:00
(3) DIR
(4) DIR *.PRG
(5) DIR *.PRG > PRN:
```

In example (1) the current system time is displayed on the screen. In the second example, the current system time is set to be 9:00 am. Example (3) puts a list of all of the files in the current default directory on the screen, Example (4) lists only those files with a .PRG extension. Example (5) is like example (4) except that the output goes to the printer.

Command lines are supplied by typing on the keyboard or by writing them into a file for subsequent processing (usually referred to as BATCH processing). Many people are allergic to mice and like typing on the keyboard better. Many longtime users of minicomputers and mainframes fall into this category. For them, typing is often much faster than pointing and clicking. Certainly editing a file to perform a long set of repetitive actions can be better than lassoing items in GEM windows.

As a trivial examples of a batch process, consider the following series of commands (DO-IT! or MS-DOS):

```
a:
cd \direc1\
copy *.cmd d:
cd \direc2\
copy names.* d:
```

This list of commands copies certain files from two folders on a floppy disc in Drive A to a RAMdisk in Drive D:. The files might be databases, compiler files, libraries for a

compiler, almost anything you might want for a work session. To do this from the GEM desktop you would have to open the ramdisk, then open a window for the \direc2\ folder on the floppy, select the files to be copied (if they all fit within the window), drag them to drive D, and so on until you have everything.

In the *MS-DOS Shell* or in *DO-IT!*, if you had written these lines into a suitable text file, you could do the whole thing with one double click. Micro-C Shell can do the same thing, but the syntax is different.

The PD program called STARTUP.PRG can do the same thing within the AUTO folder on your floppy. Everything would be ready to go as soon as you are done booting up.

Program developers are aware of the convenience of all of this and most of them regard a shell as an indispensable tool for simplifying the edit, compile, link, run cycle.

In order to use a shell program one must install the appropriate software, learn the the command language supplied by the shell developer, and write some short programs (sometimes called "shell scripts") in that language.

When Should You Use A Shell?

Most of the reasons for using a shell boil down to one: convenience. Sequences of tasks that are time-consuming for one reason or another can be distilled into one task that can be performed with minimal human intervention. Shell scripts are also useful as a way of documenting complex sequences of tasks. A disk librarian, for example, can document the origins of programs that have been collected from various places into an archive. A hard disk user could write a shell script that would enable him to restore the contents of his hard disk from the original disks in case of a failure. Program developers can use the scripts to keep track of all of the pieces they need to build a finished program.

Shell scripts can be used to build environments that allow unsophisticated users to do complicated tasks. Shell scripts can also be used to string a series of small, simple programs together to accomplish a large, complicated task.

Flexibility is another reason for using a shell. Most shells allow you to extend the basic commands that the operating system provides. It is easy, for example, to install an "EDIT" or "LIST" command of your own.

The shells sometimes provide capabilities that are not available from the GEM desktop without special accessories. Listing the files on a disk to the printer or to a text file is one example. Preserving the date when moving files between disks is another example. *DO-IT!* allows this while TOS does not. *MS-DOS Shell* allows you to display the tree structure of the folders on your disk easily.

In summary, one should consider using a shell program under the following conditions:

1) One needs to perform a series of tasks over and over again in a given order.

2) One needs to document a series of tasks that produce a desired result.

3) One needs functions from the shell that TOS does not provide.

4) One is allergic to mice.

When Should They Be Avoided?

Shell programs should be avoided when they get in the way, when they are too cumbersome, and when they fail to do what you want. These reasons may seem obvious, but the developers of shell programs are not always completely up front on this score.

My own feeling is that it is better to use GEMDOS when you are doing "one of a kind" activities. Word processing and spread sheet work are good examples. In these cases the point and click interface is very satisfactory, especially if you take a little care to customize your desktop. If you need some minor setup activity before you start, like installing a print spooler and copying a printer driver to a particular folder, use the free STARTUP program.

Not all shell programs offer all commands. The STARTUP program, for example, does not provide "mkdir" (create folder). *DO-IT!* and *MS-DOS Shell* differ in their support for condition testing and branching. Make sure you know what you need before you buy. We will get further into the subject of supported features in a future report.

Shell programs sometimes get in the way when they cannot run GEM applications properly. Some TTP and TOS applications also do not work well with some shells. The only guidance that can be offered here is "try before you buy". Find a friend who has the shell program that interests you and see if it will work with the applications you want to run.

Some features of the shell programs do not work as advertised. I found that the PATH and the ">>" output redirection functions in *MS-DOS Shell* failed.

Some shell programs are very cumbersome in that they occupy a lot of memory and disk space. The *Micro-C Shell* is an example, and I would avoid using it unless you have a hard disk.

Can They Be Made Better?

The existing shell programs are, on the whole, rather primitive. For example, they do not handle keyboard input and variable substitution very well. Their branching and condition testing capabilities are limited. This makes it difficult to use the shells to drive menu-based applications, a task at which the CLI's on minicomputers and mainframes excel.

Of course we are not paying the money for these products that we would pay for an operating system with a good CLI like DEC's RT-11 or VMS, but I think the developers could try a little harder.

The application developers bear a good share of the blame. There should be a more standard- ized approach to specifying and parsing command tails. For example my AC/FORTRAN compiler and the PD ARC.TTP program worked well with *DO-IT!*, but not with *MS-DOS Shell*. I would appreciate it if developers would provide switches to turn off the pause for keyboard input that occurs at the end of some programs. This pause often defeats the purpose of batch processing by requiring operator intervention where it is not needed.

Conclusion

There are many cases in which shell programs can make the work of even "generic" ST users more effective. Developers and implementors have yet to make sufficient use of these powerful tools.

However, the selection and evaluation of a shell program from the current crop is a lot like trying to find the pea under the walnut in the ancient version of the shell game. You have to keep your eyes open and your mind on what is going on.

This project is interesting enough that Current Notes will probably have some sort of a follow on in the near future. Please report any glitches or problems that you find to me in the BUGLIST file area of the WAACE ST BBS or to J.D.BARNES via GE Mail on GENie.

ANIMATION: HOW TO

Booklets Show the Details

Review by Bill Moes

Animation on a computer. Many of us have been mesmerized by the demos only to be maddened by our own inability to duplicate the feats we've watched. So, maybe you're interested in a little help?

Foster Art Service publishes a series of more than 100 paperback booklets which instruct readers on various artistic techniques. Although some will be of little use to computer artists, there are at least two which clearly detail animation techniques.

Preston Blair, author of the two booklets reviewed here, was one of the animators on several of Disney's classics, including *Bambi* and *Fantasia*. In these large (about 10" x 14") booklets, Blair presents some of the steps professional animators take. Each booklet consists almost entirely of numerous illustrations to develop a technique. Generally, the text is limited to the few sentences necessary for background to understand those illustrations.

Animation (booklet 6), the easier of the two, covers topics such as head construction, building bodies from rounded forms, lines of action, traits of character types, movement of body masses including two- and four-legged figures, and different views of a figure. Pencil/ line drawings are used throughout the 40 pages.

How To Animate Film Cartoons (booklet 90) takes a look at somewhat more sophisticated techniques. These include: limited animation with cutouts, perspective, expressing attitudes and emotions, paths of action, and various forms of action and reaction for characters. Twelve of the 38 pages are of colored illustrations.

The cost: a reasonable $3.95 each plus $1.00 each for postage. They may be available at artist supply stores. I ordered by mail, sending a letter listing the booklet numbers and enclosing a check for $9.90. Exactly two weeks later they arrived. Many of Foster Art Service's other booklets seem to cover subjects which could be helpful to many computer artists, whether for animation or still effects. A letter to Foster will get a title listing, a listing which, unfortunately, does not include any details on those individual titles.

Going through these two booklets may not justify your application for employment at Disney. With use, however, they could offer some fresh ideas, some new techniques. Perhaps they'll encourage the use of software too powerful to be solely spinning demos.

[Foster Art Service, Inc., 430 West Sixth Street, Tustin, CA 92680-9990 phone: NA]

LEVEL 1 IS HERE:

Open Arrays in PASCAL on the ST?

By J. Andrzej Wrotniak

If OSS and Prospero keep their word, two significantly upgraded Pascal compilers (or rather programming environments) are just about to be released. Neither of these companies, however, promise the major feature missing in the so-called Level 0 implementations: open (or variable-size) arrays as procedure parameters.

Open Array Parameters

Who Needs Them? Sooner or later -- everybody. A possibility of writing library procedures (for brevity I will use this term for both procedures and functions) for handling arrays of unknown -- at the compilation time -- size cannot be underestimated. An obvious example may be a general-purpose plotting procedure (taking X- and Y-arrays as parameters). More, we should be able to call such a routine from the same program for arrays of different sizes.

This was a standard feature of the grandfather of programming languages, FORTRAN (still alive and well, thank you), this was a standard feature of Algol -- no wonder we are missing it so badly in Pascal.

Oh, yes, the ISO standard allows for an extended version, Level 1, with the so-called conformant array parameters, but few implementations contain this feature -- and none of them for the Atari ST. Rumors about OSS "working on it right now" were quite persistent, but their update announcement does not even mention open arrays -- neither does the letter from Prospero (CURRENT NOTES, June 1987).

Why Not Modula-2?

Open array parameters are a standard feature of Modula-2 (which is basically a well-upgraded Pascal). Unfortunately, the current Modula-2 compiler from TDI (the long-expected Version 3.00a) is a classic example of crippling a great language by a lousy (this is an understatement) implementation. Yes, 90% of it works, but you must first know, which 90% it is, and you never know it for sure.

Also, there are more Pascal programmers, books and program examples floating around, and this indicates, that Pascal will be around for a while. So, back to our initial question: when will we have a Pascal implementation on ST allowing for open arrays??

It's Here!

Good news, everybody! Our waiting is over. More: it was over all the time, from the very moment of introduction of both (OSS and Prospero) compilers to the market more than a year ago, and here is the full story.

The good founding fathers from the ISO Standard Committee not only left the open arrays out of the basic standard; they did not provide for the feature of separate compilation, either. Luckily, most decent Pascal implementations include separate compilation as an extension to the standard. You write and compile your procedures separately, and declare them in other (calling) modules, as e.g.

```
PROCEDURE Do_It( x: REAL; VAR y: REAL );
                    EXTERNAL;
```

where EXTERNAL means: "you'll find this procedure in one of the libraries of separate modules specified during the linking process".

Most of the Pascal compilers (all I know for that matter) do not check, whether a procedure is declared the same way in the library module and in the calling one. This may lead to naughty program bugs (try to skip VAR in one of the declarations). On the other hand, used with care this feature gives us -- you guessed it! -- the open array feature, so useful in writing libraries of reusable modules for our programs.

How To Do It?

The simplest example may be a library procedure for computing a sum of N reals, where N is unknown at the time of declaration. The Pascal code for the OSS compiler may look like this:

```
{$E+,M+,R-}
{ R- switches off index range checking }
PROGRAM Lib_Module;

TYPE Open_Array = ARRAY [1..1] OF REAL;
                  { any size will do here }

FUNCTION Arr_Sum( VAR x: Open_Array;
                  N: INTEGER ): REAL;

  VAR i:   INTEGER;
      sum: REAL;

  BEGIN
    sum := 0.0;
```

```
    FOR i := 1 TO N DO sum := sum+x[i];
    Arr_Sum := sum;
    END;

{... here go any other library procedures ...}

BEGIN
END.
```

In Prospero Pascal, PROGRAM should be replaced with SEGMENT (which is more appropriate, anyway), and the option line should be removed from the top (the "I" compiler option should be off during the compilation instead).

The second half of our trick is the calling module -- in this example the main program:

```
PROGRAM Show_It;

VAR s1, s2: REAL;
   a:      ARRAY [1..10]    OF REAL;
   b:      ARRAY [1..1000] OF REAL;

FUNCTION Arr_Sum( VAR x: REAL; n: INTEGER ):
        REAL; EXTERNAL;
{!!! note the different declaration of x !!!}

BEGIN
  {... here read or compute arrays a and b ...}
  s1 := Arr_Sum(a[1],10);
  s2 := Arr_Sum(b[1],1000);
  {... here use the s1 and s2 as you wish ...}
END.
```

The whole trick is to declare the first parameter of Arr_Sum differently in both modules:

1. In the library module, where we are accessing individual elements of array x, it has to be declared as an array. It is, however, declared by address (this is what VAR stands for), so the procedure really expects here the address of the beginning of our array, and the type declaration serves only one purpose: type checking (the Big Brother knows better, what is good for you).

2. In the calling module (here: main program), x is declared as a REAL, but -- again -- by address, so the program will pass to Arr_Sum just the address of the REAL variable being there at the procedure call. If this variable happens to be the first element of an array, then it is just what Arr_Sum expects.

Variations On The Theme

Keeping the above points in mind, we can use this trick in a variety of ways -- as long as we know what we are doing. For example, a call

```
s := Arr_Sum(b[101],100)+Arr_Sum(b[901],100);
```

will add up the second and the tenth hundred of the elements of b, while

```
s := Arr_Sum(b[901],200);
```

will add the sum of the tenth hundred to God knows what (i.e. whatever 400 bytes happen to occupy the memory locations following b[1000]). The compiler would not detect this error, and you would get funny results without knowing why (unless you remember this article).

Using this approach with multi-dimension arrays is more tricky. It is possible, when only the first index range is unknown at the compilation time (in Pascal, as opposed to most other programming languages, the array elements are usually arranged in the memory with the last index changing fastest). The simplest way to deal with this problem is to declare a multi-dimensional array as an array of arrays (the latter of fixed length!). Thus, a library procedure declared as

```
TYPE Row_Arr = ARRAY [1..1] OF ARRAY [1..6]
                OF REAL;
FUNCTION Find_Row( VAR x: Row_Arr;
                   N: INTEGER): INTEGER;
...
```

can be redeclared in the calling module as

```
TYPE Row_of_Six = ARRAY [1..6] OF REAL;

FUNCTION Find_Row( VAR x: Row_of_Six;
        N: INTEGER ): INTEGER; EXTERNAL;
```

and can be called as

```
i := Find_Row(zz[1],100);
```

where the array zz was declared as

```
VAR zz: ARRAY [1..100] OF Row_Of_Six;
```

In other words, we have reduced the multi-dimensional problem to a one-dimensional one. •

Final Warning

Strict type checking was introduced in Pascal to keep the programmer out of trouble (well, at least in many cases). Bypassing it as in the above example allows for more programming flexibility, but carries with it a danger of (not trivial to detect) errors. Thus, do not use these tricks without need, and when you do it, pay special attention to the index ranges.

And, first of all, do not blame me if things do not work as you expect them to. Maybe you've just forgotten to cast this special spell?

DATA MANAGER ST

A Useful General Purpose Database from Timeworks

Review by Milt Creighton

For most of us, databases are not really essential to the maintenance of life and the pursuit of happiness. Certainly, most of my needs are met by any unpretentious little program which will automate my address and telephone books and throw in a mailing label feature on the side. Yeah, it would be nice if I had all my public domain and commercial programs neatly catalogued and cross-indexed, but up to now I've been willing to paw through box after unmarked box of diskettes rather than haul out the database.

I've been burned by the main-frame databases, you see. You know what I mean. The ones the database savants entice you to accept by telling you all the work is done up front and that, once you've set up your database, life is a lot easier down the line. What they don't tell you is that the up-front, down-time is always a whole lot more painful than they promised and that, to protect your by-the-fingernails victory, you have to sell yourself into eternal bondage to feed the maw of that ravening monster you've created. To be fair, however, these selfsame experts who so glibly claim that "database maintenance" is lots easier than your old ways have never had to retrain me after a three day weekend.

But, if you must have a database, and you don't want to cross-index lots of unrelated data, DATAMANAGER ST would get my vote. It's a hierarchical database, so the organization of the program is relatively straight-forward and easy for the newcomer or the rainy-day user to understand. It doesn't have the inherent power (or the coincident complexity) of a relational database but it is well written and quite powerful within its own frame of reference. The disk includes the database program, a report formatter, a label maker, and a very nice business or school graphics package. The manual is typical of most products produced by Timeworks, well written and easy to understand. Even for someone who finds nothing to match a good database manual for putting him to sleep at night, learning DATAMANAGER ST was relatively painless for me. For those of you interested in such things, DATAMANAGER ST interfaces with WORDWRITER ST (a word processor) and SWIFTCALC ST (a spreadsheet) also by Timeworks. By that I mean any report created by DATAMANAGER ST can be imported into WORDWRITER ST and embedded into existing text. Unfortunately, the graphs created within the program have to be printed on a separate page and cannot be likewise embedded.

A warning: A database created with DATAMANAGER ST is limited by the available memory of your system. But those with extended memory 520ST's should also be warned that a second limit is the size of a single data disk. That is, a single database can neither exceed the memory of your machine nor the capacity of a single disk. So, if you have a single-sided drive, the maximum size of your database will be half that of a similar 1 Meg system equipped with a double-sided drive. Of course, several public domain extended disk formatting techniques have pushed the limit of single-sided disks past the 400K mark which reduces the impact of this restriction somewhat. In addition, since DATAMANAGER ST isn't copy protected, you can put it on a hard drive and effectively remove that particular constraint.

While there isn't any disk security system, the program permits you to install a measure of security of your own. You can set up a password system so that none but those who have the correct code can get into your database--a nice feature as long as you don't forget your password.

As for the database itself, it must be run in medium or high screen resolution because 80-column capability is a must with this program. The manual does have one apparent inconsistency--in Chapter Three, page 20 you are told that if this is the first time you have used the program, you should click CANCEL on the file management box and move on to the next chapter. Naturally, at the beginning of Chapter Four you are told that if you haven't completed the tutorial in Chapter Three you should turn to page 10 of the manual, which in turn tells you to do the tutorial in Chapter Three. Take my advice and do the chapters in order. Even if the tutorial is too rudimentary for anyone but a rank amateur, it's useful to have the file later when you want a sample database to manipulate. Other than that and the problem I encountered in the Introduction where the manual put me through a painful and mind-bending explanation of the term "fields" and then proceeded to state that the word "column" would be used instead, those are the only two teeth-grinding experiences I had learning the program.

DATAMANAGER ST permits the management of data in a number of formats within the "fields" or columns. These include text, alphabetic, numbers, calculations, time, date, yes/no, or even user defined formats. What it won't permit is a paragraph of text in a single entry. So, if

you're planning to build your own astrological interpretation database based on the aspects of major planets, this one's not for you. It also won't permit the use of default values (which, being basically lazy, I consider a fairly serious drawback) and numeric data cannot be tested by a preset format to ensure it is within a desired range.

You have a choice of how the data is displayed. You can display it in "form" style, one record at a time (also the way new data is entered into the database) or you can display in "column" format. Selected columns can be hidden from view if desired and individual columns can be deleted or moved within the database but, once a column is defined, it cannot be changed. The column can be modified but only insofar as changing its name, changing the justification within the column, or deciding whether the column should be visible or hidden. Individual records can likewise be moved or deleted and certain records can be deleted in blocks.

Manipulation of the data can be accomplished by clicking the desired action within the GEM drop-down menu or (in most cases) by pushing the proper key on the keyboard. This second option is called the "Quick Key" option by DATAMANAGER ST and the QUICK KEY symbols are displayed on the screen when in column format--an easy way to learn them if you want, or a quick reference if you don't use the program often. There is both a "Save" and a "Save As" feature for renaming an updated version of the database, but be careful to observe the data disk limits.

There are a number of logical operations which can be performed between columns with the result displayed in a separate field. In addition to the usual addition, subtraction, multiplication, division, raising to a power and finding of a root, it's also possible to make IF, THEN, ELSE statements with the permissible IF tests including <, >, =, <>,<=,>=, AND, and OR.

DATAMANAGER ST also includes a "search and replace" option which permits searching the current record or all records to replace all, some, or one target string with a new string. It is also possible to select a particular group of records for review or modification. The search can be conducted over a specified range such as a range of zip codes, or by specifying one piece of

data within each record, such the selection of all records from the state of Virginia, for example.

The program can sort records alphabetically, numerically, or chronologically by date and time and can even do multiple column sorts. A multiple column sort might take the form of an alphabetical sort by last name and then a secondary alphabetical sort by first name for all those whose last names are identical. For example, the first sort will place all those whose last names are "Smith" in a group and then the secondary sort will place "Al Smith" before "Tom Smith".

The program's report formatter is pretty basic. It permits printing reports in columnar form as wide as your printer will accept. There is a header option for report titles and DATAMANAGER ST allows you to set the margins, print page numbers, and even send codes to your printer for such things as invoking special typestyles. You can move columns around or hide them. You have some choice of how the columns are justified within the report and there is a subtotal option for calculation fields. You can insert page breaks and blank lines pretty much where ever you want. Then you can print the report, save it as an ASCII file, or store it on disk for use with WORDWRITER ST, SWIFTCALC ST, or store it for use with the DATAMANAGER ST'S graphic program. Because of the design of the options in the report formatter, it can be used to print mailing labels, price tags, or inventory labels. The program also permits you to save your own report format.

The business graphics program included with DATAMANAGER ST permits the display of data in vertical bar charts, line graphs, horizontal bar charts, pie charts, and scientific graphs. Each of the above formats has a variety of options. You can overlay clusters of differently shaded vertical bars to display several sets of related information, for example. The graphics can be titled, the axis labeled, and the whole graphic boxed. You can import data from the report writer and try different graphic formats to find the one which best presents your data. The graphics themselves are quite nicely done and can be printed out either in low resolution (fast) or high resolution (slow). Be warned however: The graphics package is designed to work with Epson

compatible dot matrix printers. If your printer isn't Epson compatible, this feature won't work and no printer driver creator is included on the disk to permit you to write your own. As earlier noted, the graphic file does not interface with WORDWRITER ST and any graph you produce will have to be on a separate page.

The Bottom Line: DATAMANAGER ST ($89.95) from Timeworks is an impressive general purpose hierarchical database management program. Its structure does not appear to get in the way of most applications and its power, ease of use, and well written manual will permit even the uninitiated to learn and use the program with only modest effort. Given the nature of its structure, its drawbacks are few in number. DATAMANAGER ST cannot handle text strings greater than 256 characters in any one field, for example. In addition, the size of the database is limited by available RAM and, secondly, by the storage capacity of a single data disk. But these limitations should not be serious for most uses and DATAMANAGER ST should satisfy all but the most demanding users. In fact, I've been thinking lately about what a good idea it would be to have all my disks catalogued and cross-indexed. Now, if I can just find where I put my DATAMANAGER ST disk.

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Acquisitions....	Palmer Pyle....	(703) 437-3883
Training Coord..	Glenn Bernstein	(703) 455-6053
Program Managers		
Main Meeting..	Alan Friedman..	(703) 425-0575
ST Meeting....	Ian Charters...	(703) 845-7576
Disk Librarians		
8-bit.....	Evan Brooks....	(703) 354-4482
ST.....	Allen Clarke...	(703) 250-4469
Public Domain Disk Editors		
8-bit.....	Roy Brooks.....	(703) 750-0146
ST.....	Ed Seward.....	(703) 573-3044
MIDI Keyboard...	Mike Lehr.....	(703) 931-9947
Other SIGs		
Telecom SIG...	Ted Bell.....	(703) 455-5312
	Ed Seward.....	(703) 573-3044
ST Programmers	Ken Whitesell..	(703) 636-4756
MS DOS SIG....	Mike Gibbons...	(703) 440-0379
SYSOP.....	Ted Bell.....	(703) 455-5312
Bulletin Boards		
8-bit.....	ARMUDIC.....	(703) 569-8305
ST.....	WAACE ST.....	(703) 569-3227
Fest'87 Info....	Randy Ingalsbe.	(703) 644-0159
HOTLINE.....	Andrea Bonham..	(703) 534-3503

****

BBS fee information:
NOVATARI & NCAUG members.....$5.00/year
other WAACE members.....$7.50/year
Make checks payable to NOVATARI and send to:
Ted Bell, 9705 Shipwright Ln, Burke VA 22015

****

NEW MEMBERS: Dues are $20/year which includes a subscription to CURRENT NOTES. Join at the main meeting, chapter meeting or by sending $20, payable to NOVATARI, to Earl Lilley, 821 Ninovan Road SE, 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 group WILL NOT be meeting during the summer AND Dave Heagy will not be able to coordinate the meetings due to a change of job. Anyone interested in regrouping the chapter in the fall should contact Dave (281-9226) or Georgia Weatherhead.

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 PER.	BIG AUDITORIUM	SMALL AUDITORIUM
5:30-6:00	Sample Class	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

JULY 12 Program. "I dream of GEnie with the low, low cost." There will be door prizes, too, with this program of interest to both 8-bit and 16-bit, 300 baud, and 1200 baud enthusiasts.

By the time I write this you may have already been informed of the FCC (Federal Communications Commission) effort to tax groups like GEnie and CompuServe for using local telephone loops. The cost will be absorbed by the users (you and me). Data transmission uses a twelfth of the lines that voice transmission does, and yet FCC is not going to try to tax the Fortune 500 groups that use local loops through PBX machines. You may want to write FCC chairman Dennis Patrick and your congressman to point out this inequity. [Dennis Patrick, Chairman, (or Gerald Brock, Common Carrier Bureau), FCC, 1919 M Street NW, Washington, D.C. 20554.]

AUGUST 9 Program. Come cool off. Remember the air conditioner will be particularly strong. Hoping to watch some new Atari releases.

JUNE Notes. There was music and lights. Mike Lehr and Grant Slawson showed us how a professional musician uses the ST and MIDI. The new PCViewer by Vivid Systems was demonstrated on botht he ST and the 800. The PCViewer will bring a new dimension to our meetings. You will be able to see what is on the monitor, as it will be projected to the large screen.

CLASSES. The PCViewer and other new acquisitions (4 STs) will make it possible to start classes again. Note on our list of officers, Glenn Bernstein has been added as our Training Coordinator. Glenn will be setting up classes to be held maybe in your neighborhood. Look for his notice below. Call him if you want to take a class he lists, if you want a class subject different from what he lists, or if you want to teach a class. Teachers will be paid.

NOVATARI COMPUTER EDUCATION

GOOD NEWS FOR ATARI USERS !!!!

NOVATARI will be offering computer courses for ATARI computers. These courses are designed for the beginner who is interested in learning how to use application programs. There will be courses for botht he 8-bit and ST computers. Present plans include the following courses:

8-BIT	ST
Assembly Language	Assembly Language
AtariWriter+	First Word
Amodem	Flash
Bulletin Boards	Bulletin Boards
Synfile+	dBMAN
DOS 2.5	

The price for each course session is $5 for NOVATARI members and $10 for non-members. To sign

up for these or to request additional course topics, contact Glenn Bernstein at (703-455-6053) between 6 and 9 pm.

ATARIFEST LOGO CONTEST!!!

Design a logo for T-shirts to be sold at the Atarifest. Send your design for a logo on an 8x11 paper before July 20 to: Chris Bigelow, 148 Fairview Ave., Frederick, MD 21701. Entries will be judged on overall esthetic appeal by a panel of Atarifest chair people. Prize for a winning design will be a free T-shirt and a free ticket to the Saturday evening October 24 Banquet.

ATARIFEST BANQUET

After Saturday's fest, there will be a banquet at the Fairfax City Holiday Inn. Guest speakers from the world of Atari will be on hand. Only 120 tickets are available on a first-come first-serve basis. To reserve your space, send a check for $20, payable to Novatari, and a self-addressed stamped envelope to Andrea Bonham, 3344 Beechtree Lane, Falls Church, VA 22042 (703) 534-3503.

ATARI USERS REGIONAL ASSOCIATION (AURA)

President.....	John Barnes.....	301-652-0667
Vice President...	Barry Marcus....	301-926-3660
Treasurer.....	Mo Sherman.....	301-593-1076
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. 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). All meetings for the rest of 1987 are on the first Thursday, with the exception of October, when there is no meeting.

Correspondence All correspondence, including 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.

AURA REPORT FOR JUNE 87

1. Meetings - Our next meeting will be July 2nd. The theme will be alternative Operating systems. We will discuss SpartaDOS for the 8-bit machines and the various Shell programs for the ST. Vice President Barry Marcus is responsible for coordinating meeting agendas. Please contact Barry to get on the agenda. The desktop publishing session is being postponed to September to allow for better attendance.

2. Member Survey - Barry Marcus is conducting a survey of hardware owned by AURA members. The results of this survey are being used to assist in program planning. Please contact Barry if you have not yet participated.

4. 8-bit Library - The latest ANTIC and ANALOG disks are available. We are still working on the "starter kit". More reviews are needed for the reference manual on disks 41 to 80.

5. 16-bit Library - Jeff Kellogg has order forms for members who want to obtain material from the 16-bit library. Jeff now has almost all of the CURRENT NOTES Disks. Send Jeff an order form for the disks you want and then pick them up at the next meeting. There are too many disks in the library to allow us to provide anything better than pot luck for spot sales.

We have released AURA disk - This disk features software catalogs for GENie and the WAACE BBS, a survivable RAMdisk, a transparent print spooler, a batch startup processor, and other useful software. Check it out and bring us a disk with your own favorites. Make sure that everything is adequately documented.

We will try to have a modest inventory of the latest releases on hand. Try to get your submissions to Jeff Kellogg well before the meeting. Members of other groups are welcome to order AURA library disks by mail (send your order to our P.O. Box). The doc file on the disk is available on the WAACE BBS as file AURADISK.001 in the TEXT area.

6. DEMONSTRATIONS - Many people were very happy with our experiment in setting up concurrent 8- and 16-bit demos. This gives more time for the material and people can filter out things that are not of interest to them. Now all we need are additional volunteers to make presentations.

6.b 8-bit demo - Bill Frye gave a presentation on telecommunications using EXPRESS. Bill succeeded in finding a dial tone to allow live connection to Midnight Express and the Boot Factory BBS's.

6.c 16-bit demo - John Barnes discussed FLASH! using a capture file from an actual session with GENie.

7. Courses - We are checking on classrooms for a course on ST Basics. Please contact me if you have any ideas for cheap, useable space. Other possible topics include desktop publishing, telecommunications, and graphic design tools. These courses would cost the students about $5 per hour of classroom time plus the cost of materials. Any excess of income over expenses would go to the instructor.

8. BBS's - I want to encourage everyone with a modem to try the WAACE BBS's. I don't know what ARMUDIC is like, but the ST BBS is very good. The wait to get on is usually minimal and I make it on the first try about 80% of the time. The software catalog for this BBS (current as of early May 87) is on our library disk .

9. MEMBERSHIP - AURA dues are now $20 per year for Regular Members and $5 for Library members. Regular Member dues include 10 issues of CURRENT NOTES magazine. We are discontinuing the practice of sending out one copy of CURRENT NOTES past the expiration date. AURA received 205 copies of CURRENT NOTES for June 87.

All members are hereby reminded that subscribing to CURRENT NOTES is NOT a prerequisite for membership in AURA. If you do not want, the magazine you can join for $5 without losing any privileges.

We are attempting to institute a reminder system for membership renewals.

10. AURA Roster - Copies of the AURA roster are available at meetings or by written request to Richard Stoll (enclose a self-addressed stamped envelope).

11. Treasurer's report - Mo Sherman reports that we have a balance of about $1800. Our rent with Temple Israel is paid through May of 1988. Mo has been working to generate advertsing income and he would appreciate help along this line.

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 Dr, Rockville, MD 20853. Membership includes CURRENT NOTES subscription.

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. 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, 15313 Blacksmith Terr, Woodbridge, VA 22191.

FREDERICK ATARI COMPUTER ENTHUSIASTS (FACE)

President..... John Maschmeier.. 301-271-2470
Vice President... Mike Kerwin..... 301-845-4477
Treasurer..... Buddy Smallwood.. 301-432-6863
Librarian..... Jason Hamon.....
Secretary..... Bill Mentzer.....
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, PO Box 300, Keedysville, MD 21756.

MARYLAND ATARI COMPUTER CLUB (MACC)

President..... Jim Hill..... 301-461-7556
Vice-President... Addison Scott....
Secretary..... Marvin Feiges....
Treasurer..... John Cromwell....
Group Rep..... Leon Moore.....

MEETINGS: MACC meets on the last Tuesday of every month at the Pikesville, MD library. Meetings will start at 6:30 pm. Directions: Baltimore Beltway exit 20 east (Reisterstown Rd) 1 mile. The Pikesville Library is on the left next to the Maryland State Police Barracks. Please feel free to call for information on the club's monthly 8-bit and ST demos.

NEW MEMBERS: join at the meeting or contact Jim Hill (301) 461-7556. Membership fee is $20/yr pro-rated from June to end of year.

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 , 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: 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
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.).

NEW MEMBERS: Join at meeting. Dues, $20/year, include a subscription to CURRENT NOTES.

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FORT LEAVENWORTH ATARI GROUP (FLAG), Kansas. Contact: John L. Hutchinson, PO Box 3233, Ft. Leavenworth, KS 66027 (913) 651-5631.

GREATER RICHMOND ATARI SUPPORT PROGRAM (GRASP), Virginia. Contact: S. Thomas Marvin, 1420 Yale Ave., Richmond, VA 23224 (804) 233-6155.

HUNTSVILLE ATARI USERS GROUP (HAUG), Alabama. Contact: Levin C. Soule, 3911 W. Crestview, Huntsville, AL 35816 (205) 534-1815.

PACKERLAND ATARI COMPUTER USERS SOCIETY (PACUS), Wisconsin. Contact: Randy McSorley, 339 S. Maple St., Kimberly, WI 54136 (414) 788-1058.

PIEDMONT TRIAD ATARI USERS GROUP (PTAUG), North Carolina. Contact: Hardy Hall, Rt. 9, Box 274C, Reidsville, NC 27320.

ROCKLAND ATARI COMPUTER USERS GROUP (RACUG). Contact: Richard Bloch, 29 Riverglen Dr., Thiells, NY 10984 (914) 429-5283.

SOUTHSIDE TIDEWATER ATARI TECHNICAL USERS SOCIETY (STATUS), Virginia. Contact: Buck Maddrey, 5245 Shenstone Circle, Virginia Beach, VA 23455 (804) 464-2100.

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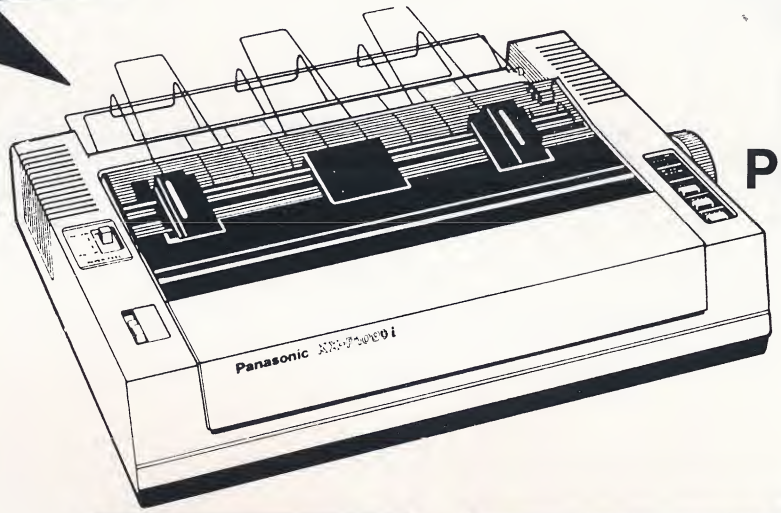

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ATARIFEST'87

AT

Fairfax High School

October 24th, 10:00am - 5:00pm
October 25th, NOON - 5:00pm

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Vendors and/or exhibitors cantact:

Mr. Palmer Pyle
Vendor Coordinator
709 S. Concord Court
Sterling, VA 22170
(703) 437-3883

User Group queries:

Ms. Georgia Weatherhead
User Group Coordinator
3130 Cedar Grove Drive
Fairfax, VA 22031
(703) 938-4829

Any others:

Mr. Randy A. Ingalsbe
Information Coordinator
7414 Gary Street
Springfield, VA 22150
(703) 644-0159