$3.00

Current Notes

Vol. 7 No. 2 March 1987

Your Monitor on the World of Atari

Volume 7, No. 2

TABLE OF CONTENTS

FEATURES

ADVERTISERS

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 for $20/year (see page 55. Second-Class Postage paid at Sterling, VA. POSTMASTER: Send address changes to Current Notes, Inc. 122 N. Johnson Rd., Sterling, VA 22170.

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

EXCHANGE SUBSCRIPTIONS are available for other Atari User Groups. Send exchange newsletters to Jack Holtzhauer, 15817 Vista Drive, Dumfries, VA 22026. Material in this newsletter may be reprinted by other Atari user groups provided *Current Notes* and the author are cited.

ADVERTISING RATES: Half-year rates (5 issues): quarter page, $160; third page, $192; half page, $280; full page, $500. Single insertion rates: quarter page, $40; third page, $48; half page, $70; full page, $125. Submit photo-ready copy to editor by the 14th of the preceding month.

BACK ISSUES ($2/copy): A limited number of back issues are available: 1985: JUL/AUG, SEP, OCT, NOV, DEC; 1986 FEB, ---, APR, MAY, JUN, JUL/AUG, SEP, OCT, NOV, DEC; 1987 FEB, MAR

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

EDITORIAL

Over the past several months, I have been receiving occasional letters from readers with Atari-related questions, or advise, which I would like to share with our readers. On the questions, sometimes I have the answers. More often than not, I don't have the answers. To get them, I have to turn to experts in the community who can help. The most effective way to do that, is to publish the letters right here in *Current Notes* where the question can be broadcast to the widest possible array of readers. I intended to do that. In fact, I had four pages all printed out and formatted and ready to go. But at the last minute, I received a four-page article written by Gregg Anderson detailing his recent visit to Atari headquarters and the little tid-bits he and Georgia Weatherhead, who was visiting Atari at the same time, picked up. Since most of our readers are always hungary for Atari info and this trip report would not be anywhere near as interesting if it were delayed for a month, the letters, unfortunately, had to wait once more. Please be patient; we will get to them.

I'd love to be able to answer all correspondence as soon as it comes in. In fact, some of it, I do. Library orders are filled and sent out usually within a day of receiving the order. We used to do this for new subscription orders as well. However, since the volume of requests has risen considerably, new requests are accumulated for a week or two and then sent out in a separate second-class mailing. The main reason is cost. Sent individually, *Current Notes* is mailed first class at a cost of approximately $1.40 for postage and envelope. Second-class rates are only a fraction of this.

I also try and send out a reminder to subscribers whose subscription will soon be expiring. At this writing, there are 700 subscribers (as opposed to club members). That translates to about 70 letters per issue that have to mailed out.

And then there's correspondence with Atari vendors, advertisers, stores that carry *Current Notes*, and, of course, authors. All of these letters have to be opened and read. Much of it has to be recorded, both on paper and in databases. Where a response is required, the response or, in the case of the library, the order, has to be prepared, labels have to be printed, envelopes stuffed and sealed and weighed and stamped and mailed. In between, new library disks are prepared, the newsletter is edited, formatted, and printed in final copy, and I talk to a lot of people. And all of this is done in what used to be called "spare time" (I actually do have a 40-hour-a-week job that keeps me quite occuppied). Needless to say, I, (and increasingly my family), are very busy. But still, we try and make progress every month.

So, what's on the Agenda for March? As mentioned above, Gregg Anderson takes us on a personal tour of Atari and relays the latest info he was able to come up with. Terry White did Atari a favor by helping out a British firm with some equipment they needed to do some demos here in Washington. In the process, he managed to get an interesting interview with a very high-tech company that is turning to STs to speed up their development. For those 8-bit hackers in the audience, we have a rare treat. Dr. Bruce Noonan (who is primarily responsible for bringing us the updated versions of *ST Writer*), provides a short program that allows you to search your Atari's memory for specific character strings.

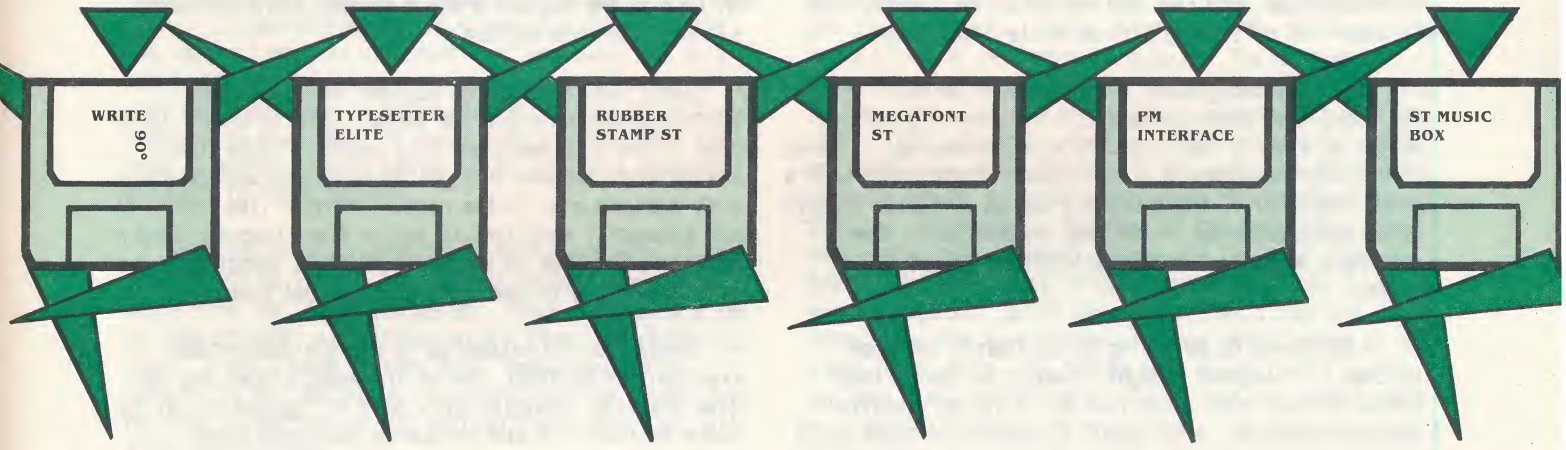
I promised some sample *Publishing Parter* output this month and, thanks to Milt Creighton, we have it. Look at Milt's review of *Habawriter II*. It is reproduced exactly as it came off Milt's NEC Pinwriter P6 24-pin dot matrix printer. Although output from a 9-pin dot matrix printer is not good enough for the newsletter, this 24-pin output (360 x 360 dot resolution) is quite impressive. (Unfortunately, it took 2.5 hours to print those four pages.) Want even higher quality? Look at the CACI ad on the inside back cover. This ad was produced using *Publishing Parter* on a machine with a 2,540 lines per inch resolution. It should satisfy the most demanding requirements.

Finally, let me welcome some new "regulars" to the *Current Notes* family. Jeff Greenblatt, who has spent countless hours developing the superb Magic disks in the CN library, is starting a new column for users of the Magic Sac -- "Adventures in the Magic Sacdom". Many ST fans have enjoyed the benefits of the "Tiny" compression algorithms for storing pictures on your ST. This month, the author of that system, David Mumper, launches his "ST Art Gallery" and releases two brand new art disks (as well as an updated set of TINY programs) from his incredible library of ST art work. And, finally, Andy Nicola, who has devoted enormous amounts of time and energy into creating the most extensive and up-to-date listing of available Atari ST products launches a new column covering, of course, "Recent ST Releases."

Is *Current Notes* available at your local Atari retailer? If not, why not encourage him to carry the magazine? For further information, have your dealer contact us at 122 N. Johnson Rd., Sterling, VA 22170 (703) 450-4761.

Joe Waters

The Atari ST Software Line Up



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

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

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

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

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

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

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

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

STRANGER IN PARADISE
Or: A Tour to the Heart of Atari

by Gregg Anderson

Before I start this, I want to extend my deepest thanks to Sandy Austin, Atari's User Group Coordinater. It was Sandy that made my visit to Atari's main Headquarters both possible and pleasant. I also want to thank Cary Gee, Ed Cline and everyone else I spoke with at Atari for putting up with me while I was there.

As for my background, well I've been an Atari user for about five years now and still use my original 800 system on a daily basis (mostly word processing). I'm an officer in the Rushmore Atari Computer Enthusiasts user's group (Rapid City, South Dakota) and am a regular on both GEnie and Compuserve. I've been interested in home computers in general (and Atari in particular) for years.

I was going to be flying to California for some special training and thought it would be the perfect chance to take some leave time and visit my favorite computer company. After about two months of phone calls and coordinations, I was given permission for the visit. It seems that Atari doesn't get too many requests for visits and Sandy was surprised that anyone would want to see the home office. I made the tour as a representative of my user's group, so I didn't get the 'red carpet' treatment that the more famous magazines get. What I got was a chance to see Atari and its' people as they really are in day-to-day working conditions. In many ways that's better than getting the red-carpet treatment. I got to speak to folks and do things that would have been impossible in an organized tour.

The day of my visit turned out to be one of the foggiest that San Francisco and Sunnyvale had seen in years. This made finding the place a lot of fun, not to mention what it did to the traffic. Atari's headquarters is an impressive three story tan and black-glass building in a VERY large industrial park. I almost missed it when I finally got there, the only clue to the building's identity is a small Atari Logo and the name "ATARI" in tiny letters next to the front door.

As you enter, you find yourself in a small waiting room. Here works one of the busiest people I've ever seen, Atari's receptionist. In the time I was there, not once did I see this young lady have a second of peace and quiet. Both she and the security guard were constantly answering the phone, filling out forms and giving directions. To one side of the room stood a bulletin board covered with Atari-related articles, reports and ads. Of even greater interest were the contents of a small push cart sitting underneath the board. This cart was loaded with a new Mega ST computer and two monitors, one Atari RGB and one of unknown make. Needless to say I spent more than a few interesting moments by that cart while filling out my visitor's pass card. As I finished the card, Sandy Austin came out to collect me and we were off for the heart of Atari. Oh, a word of advice: unless you're a lawyer, NEVER WEAR A 3 PIECE SUIT TO ATARI. I did and I stuck out like a punk rocker at the Opera. Uniform of the day was a short sleeved shirt and casual slacks, ties were optional.

Sandy took me into the Customer Relations and Marketing section where she works. This is a very large room filled with desks and busy people. Since room dividers are nowhere in sight everyone can see and share with everyone else in the room, I kind of like that. I was pleasantly surprised to see an Atari computer hard at work on every desk in the room. Quite a change from the stories we used to hear during the Warner days.

Sandy then introduced me to Georgia Weatherhead, president of NOVATARI (one of the WAACE clubs) who was also visiting. Georgia and I sort of 'ganged up' on the folks at Atari. I started asking questions about hardware developments and future improvments, while Georgia was asking about software, user group support and Atari's efforts to break back into the education market. Between the two of us, Atari didn't have a chance. We stayed together for the rest of the visit and I know I learned more with her there then I could have hoped to otherwise. Those of you who know Georgia know what kind of a person she is, for the rest of you, I can sum it up in one word: Super!

Next to the Customer Relations center is Atari's 'cubby-hole' BBS. It really is the size of a small closet. I got to meet Dave Flory, one of the Sysops and spoke to him for a little bit about the BBS and Atari in general. Though not an employee of Atari, (he's a motorcycle policeman in real life), Dave is an active and inventive Atari user who takes great pleasure in his BBS job. If you're reading this, then you're already familiar with Atari's BBS, so I'll not bore you with a another 'in-depth' description. Dave did point out that the MichTron BBS program Atari uses takes full advantage of the multi-user / multi-tasking capability of the 68000 chip and TOS. The system is actually capable of handling up to four (4) modems at a time, while allowing the Sysop to simultaneously perform file and utility functions. All in all a very impressive program. Presently the BBS has to use a single SH-204 for each 520ST, and anything uploaded to one line isn't automatically shared by the others. This will change when Atari and MichTron get the final version of QMI's networking system. This will allow the BBS to share a single data base and go a long way in cutting down on the Sysop's work load.

I did get to see the new Atari 1200-baud modem (SX-212) in operation, it was running one of the BBS lines. The unit is a single Printed Circut Board modem

about the size of the Avatex 1200 (which uses two PCBs). The biggest advantages it offers are the built-in RS-232 and Atari (8-bit) serial ports. They allow the SX-212 to wire directly to either the XE or the ST computers (though not at the same time). This will save the XE user the cost of an interface and allow the modem to be used on other computers. At less then $100, I expect this unit will sell very nicely.

The few, the proud, the never released: I accidently found one of the VERY rare 1450XLDs while talking to Dave Flory. It was sitting on the floor in a corner of the BBS room all covered with dust. It was about the only Atari computer I saw that day that wasn't actively being used for something. I had forgotten how big the XLD was supposed to have been, it makes even the 1040 look tiny. Hmmm, I wonder if they would let me give it a good home out here in South Dakota?

Speaking of older computers, throughout many of the offices and hallways I kept seeing 'other' computers. Units from IBM, Apple and so-on. There were quite a few of them in fact, all sitting on the floor and gathering dust. I don't know if they were 'comparison units' brought in for testing or leftovers from the Warner days, but they looked rather sad sitting there like that, all alone and rejected.

The interior of Atari is a maze of hallways, staircases and cubby-holes. In fact, one of the employees joked that the maze of halls had been where the idea for *Pacman* came from. Without a map it would be awfully easy to get lost in there, but we had a good guide in Sandy Austin so there was no real danger. By the way, it seems that Atari is spending its' money in Sales and Research rather then in building upkeep. I noticed that some of the less traveled hallways and rooms were starting to show signs of wear and tear.

As we wound our way through the first floor Sandy took us to meet some of the people responsible for designing and writing the instruction manuals for all of Atari's hardware and software. Personally, I think they're doing an outstanding job, at least it seems to me that the quality of Atari's manuals have greatly improved since the Warner days.

After our tour of the first floor, we went upstairs to visit the development center, where new hardware and software is created and prepared for production. While there, we were allowed into two of the Electronics Labs where work was being done on Atari's new PC (IBM clone) and the MEGA-ST series. Regretably, I didn't get to do a full 'hands on' test of either machine. In fact, I'm not sure we should have even been allowed to see them. Still, we did get to see enough to gather a few impressions.

1) The Mega system looks even smaller then its' 14x14x2.5" implies. In fact it's no wider then the SC-1224 or SC124 monitors (which sit on top of the CPU case). Compared to the Amiga, IBM or the Lisa, the Mega seems microscopic in size. The dove gray CPU case houses everything except the monitor and keyboard (which holds the mouse port). This includes the 68000 CPU, 1,2 or 4 Meg of RAM (expandable up to 16 Meg thanks to the new MMU), 720K disk drive, larger power supply, Zorro-type expansion slot, full expansion bus (to outside of case), battery backed real-time clock, blit Chip, and all the I/O ports and devices we've gotten used to in the 520/1040ST. Using the same video and audio chips as the 520/1040, the Mega will offer identical video modes and sound capability as the current ST line, no changes here (at least not yet). Sadly, like the 1040, the Mega lacks any built-in RF or Composite output. The keyboard is fully detachable and connects to the CPU by a phone cord. In looks and size, the new keyboard seems a lot like the 520ST. Its' layout is identical and its' overall width and depth seem about the same. But where the 520 has to be thick enough to house a computer, the Mega's stays thin and lightweight. The feel of the individual keys seem better too, somewhat firmer and 'crisper' then the 520's. The unit I saw (dissassembled on a test bench) was the Mega ST1, which uses the standard 256k RAM chips rather then the more expensive 1 Meg chips shared by the 2 and 4 meg units. No prices were given, but I assume the Mega 1 will be slightly higher then the 1040ST (MSRP of around $1100 for a color system), and that the 2 and 4 Meg systems will be $200-$500 higher (but still less then a comparatively equipted Amiga or Apple). I can't help but wonder what will happen to the current 1040 line when the Mega ST1 hits the streets. Without a price drop, I don't see it staying comptitive with its' fancier big brothers. Who knows, maybe Atari will combine the 520/1040 into a single expandable 512k machine with internal disk drive and power supply.

2) All Atari purists of old may now take a moment to groan and shake their heads in grief and confusion, Atari really is releasing an IBM/MS-DOS clone. In the second lab, we got to see the new Atari PC in operation, running the Mandrill graphics demo on a 3rd party EGA monitor (with the Atari nameplate glued to it). The colors were crisp, clear and very impressive with no sign of flicker or vibration. In fact, I wish all of Atari's units could produce such a picture at the same resolution. The unit itself is very close to the Mega ST in size and layout, looking only slightly thicker (3" rather then 2.5") and having a 360k, 5 1/4" drive on its' front left rather then the Megas' front right 3.5" unit. The keyboard is a fully detatchable XT type with a feel similar to the Mega's new keyboard. The PC comes complete with FULL monochrome, CGA, EGA and Hercules color capability built in, and offers an expansion bus for accessing an expansion card cage that will be released later. All this would be impressive enough just as it is, but there is more. Atari is also releasing (with the PC) a 'green screen' monochrome monitor that will operate in ALL IBM graphics modes, shifting to 16 shades of (green) gray when in EGA mode. All this plus MS-DOS and GEM for less then $700? Sounds like a lot of clone companies out there are in BIG trouble.

I'll be the first to admit that I was surprised by

Atari's PC clone, but I can see at least two big reasons for entering the 'Clone Cup' race. First of all, there is a lot of profit to be had in the 'Clone Wars', and the PC should make an outstanding cash-cow for Atari. Second is that no computer company seems to be taken very seriously until they sell something in the MS-DOS market. This is a sad comment to make about the industry and computer buying public, but it's true none the less. Even Commodore and Apple are starting to offer (or talking about offering) something for the MS-DOS world.

I noticed that neither machine, the Mega or PC, comes with a cooling fan. Now before anyone starts moaning about that shortcoming, let me explain something. Had the Mega or PC been designed with the same technology and assembly methods as the IBM PC or the Amiga, then such a cooling system would be needed. But the Atari machines are the results of a more modern technology that combines the functions of several chips into a single chip. By reducing the number of chips, you reduce the energy consumed and thus the heat produced. You also totally eliminate noise by forgoing the cooling fan. Both machines do fine using the diagonal cooling slots that run down the sides of the machines' upper surfaces. In short, why add something you don't need and would only increase the cost?

But back to the tour, we stayed in the labs only a few seconds as they were unoccuppied and Sandy was concerned we might see something we shouldn't. Understandable but frustrating, I'd really wanted to spend some time in there <grin>. I had hoped to learn something of the still 'experimental' work being done, like the EST, TT, IBM emulator, Amie and so-forth. I had also wanted to meet Shiraz Shivji, but Sandy explained that he was out of town that day. After leaving the labs, we were introduced to a wide range of Atari's 'core' personnel; Sig Hartman, Neil Harris, John Skrunch (Mr. Software), Cary Gee (well known to all us C-Serve users) and several others. After talking with them for a rather short time, I was able to spend a few minutes with Ed Cline, Atari's Director of Sales Administration. I'd met Ed a year ago in Little Rock and stayed in touch with him afterwards. We spoke for a little while and he gave me some material on the new PC and Desktop Publishing System to take back to the Atari dealer in Rapid City.

Then, sadly, it was time to leave. I'd spent over two hours in there though it had seemed like less than two minutes. Sandy had given us a lot of her time to show us around. But she had a lot of work waiting for her and had to get back to it, and I had to get back on the road. Before I move on to other matters I want to again thank Atari (and Sandy in particular) for letting me wander around like they did (escort and all). There is a sense of 'purpose' in Atari, something shared and shown by everyone I saw there. It's more than just a 'can do' attitude, it's a 'will do' attitude. The difference may seem trivial, but believe me when I say it's not. We may complain from time to time about the way Atari seems to do things, but we have to admit that they do get things done. Atari's impossible turn-around from bankruptcy to boom was only the beginning. If what I saw, heard and felt at Atari continues then I have no doubt but that the future is not just bright, its' blinding!

At any rate, after we left Atari Georgia and I decided to stick together for a little while. During a quick lunch we compaired notes on what we had seen and heard while at Atari, between the two of us it was quite a bit. We then picked up a phone book and went looking for Atari dealers. The Sunnyvale area is a cornucopia of Atari dedicated and computer related shops and we had little difficulty in finding them. I had forgotten what it was like, having so many Atari dealerships near you. In Rapid City the ST is just starting out so our range of available dealerships is limited to one. But, after an hour or two of visiting Atari dealers we had to call it quits and go our separate ways, me on down to Lompoc and Georgia back to Washington.

And so ended my visit to Atari's headquarters. I learned quite a bit while there, some of it I've already mentioned and some of it I'll list now. What follows this are some thoughts, stories, rumors and hints I picked up while at Atari and from other sources. I have to admit that a lot of the remainder is based as much on what someone wouldn't say as on what they would. Also, I'm not listing everything I may have heard because on some of it I had to promise silence. At least until Atari releases some sort of 'official' word about it.

1) Blit Chip: The software (revised operating system) is finished and is 100%, the hardware is finished and works beautifully. The only hitch (as of January) is having to wait for the fabricator to get up to speed on usable production chips. Remember, Atari still has to rely on outside fabricators for its' mass-produced chips. Usually this is no problem for 'off the shelf' chips such as the Motorola 68000 CPU and and Yamaha YM2149 sound chip, but for custom designed units like the Blitter or Amie it can be a major headache. The Mega series (and the upgrade kits for current ST owners) are ready and are waiting only for the Blit chip to reach full production.

2) Amie: Well.... would you believe a shield of "no comment" almost a yard thick? Very frustrating. Amie, as a system, exists and works GREAT! In fact I understand that it makes the new Apple //GS sound like a Vic-20. The difficulty (as mentioned in other articles) is in transfering the Amie system from a working breadboard into a single chip. The complexity of Amie has made compressing it into 'single chip status' much more difficult and involved then first expected. Atari isn't giving up on it though, a 3rd party has been brought in to continue Amie's development and there is still hope we'll see it in the future. I was reminded that Amie can never be a direct replacement for the ST's current sound chip. This is because the chip currently used does a lot more then just generate sound, it also helps control I/O. A one on one swap would create compatibility problems that could never be overcome. My own suspicion is that we might see Amie as a MIDI output

device, a ROM cartridge plug-in or as part of an EST system upgrade. All I know for sure is that outstanding audio is fast becoming a requirment in the small PC market and that Amie would fill that need perfectly.

3) The TT: (Thirtytwo-Thirtytwo) Word here is that the 'Vax in a Box' has progressed past the 'Concept and Design' stage and is well into working bread-board. Details as to it's exact memory, CPU, speed, video capabilities and price depend on who you talk to. They vary so much I'm not going to repeat any of them, but in any case the TT promises to be something else.

4) GST: Not a "soon to be" or even a "might have been" but a "never was". Seems someone overheard part of a conversation and didn't hang around to hear the rest of it. Because of that a whole new rumor industry was born.

5) EST: Wow! Folk at Atari react to the letters EST like a vampire does to garlic. From the reactions I got I can only assume that either they are saving the EST as a surprise to spring full blown on the market (like they did with the PC) or that the EST really is still in the 'concept' stage. I couldn't get ANYTHING solid on it, perhaps the most frustrating part of the whole trip for me. I mentioned that personally I would like to see the EST graphic and audio upgrade made available as an 'add on' enhancement for the Mega line, using either the internal slot or external expansion bus since they both access the entire motherboard. The reaction I got was a calm "I'll pass it on" so I don't expect to see anything real soon.

6) Atari/Amiga/Commodore lawsuit: No official comment at all, but they seem pretty confident. The case should go to court around March, how long it will take after that is anyone's guess. It seems that the case will be a matter of Atari's legal claims vs. Commodore's banks. Did you hear what the defense from Commodore is supposed to be? According to the blurb I read on GEnie's Amiga forum, they are claiming the money Atari paid Amiga was only a no-interest loan. The chip-set was supposedly only legal eye-wash to keep the IRS and lawyers happy and that Atari never wanted the chip set in the first place. I hope someone was just making a joke about it, I'd hate to think that really was their defense.

7) IBM Emulator: Also called the Big Blue Box, Clone in a box and other, less polite names. This unit was placed on temporary hold while the PC was readied for release. The delay was because both units were being developed by the same design team and the PC had been given a higher priority. The emulator is a much more complex project then the PC was, because in addition to having to be 100% MS-DOS compatible, it has to do so while using the ST's keyboard, I/O, and video system. This causes complications (something Commodore learned with it's still unavailable Sidecar). Like the PC, the 'Clone in a box' uses a proprietary Operating System created by Atari's developers. The initial unit shown at the last COMDEX was shaped like the SH-204, personally I wouldn't be surprised to see the final version as a 'stackable' add-on (like the announced Winchester hard drive) for the Mega series.

8) 8-Bit Emulators: Atari's official word is NO! Software systems are too slow and incompatible to be effective and the hardware variety is far too expensive to be worth developing (it would be cheaper to buy a 65XE and drive). Some of you may have heard of an Atari 800 emulator that was uploaded to the Boards a little while ago by a very clever and innovative programmer. This program quickly vanished because (as I understand it) it used the copyrighted OS from Atari's old translator disk. Though an oversight, this was still a no-no and the emulator had to be pulled until the author and Atari can get together and come to some sort of agreement. Unfortunatly the attitude at Atari right now seems to be "Don't bother me, i'm too busy right now". I've become rather disappointed with Atari's reaction in this situation and their seeming lack of support for independent programmers. Granted, the folks at Atari are already up to their eyebrows in work, but a little cooperation with promising independent programmers could reap great rewards down the road.

9) 65XE Game Machine: This unit was shown at the last CES complete with detachable keyboard, disk drive and laser-type gun. It looks like Atari is thinking of competing with Nintendo and Sega for outstanding home video games, while offering expandability that they can't. This way the buyer can start out with a ROM cartidge video game and grow into a full fledged 8-bit computer 100% compatible with the entire XE line of software. If this unit does make it to market, I don't expect to see the current 65XE computer stay in the inventory. What effect it will have on the 7800 Pro System (and visa-versa) I don't know. The 7800 offers better graphics then the current XE computer can, so I have to assume Atari feels that there are at least three video game markets out there. One interested in simple and inexpensive games (2600), one wanting supergraphics video games (7800) and one that wants to start out playing games but will want something he can turn into a full fledged computer (65XE). I've noticed that since the Tramiel family took control of Atari they have segmented the market and divided their product line to apply a specific product for each market segment. This is quite a change from the old 'one unit fits all' philosophy that the industry started out with.

Well, that's about it folks. I hope I've not bored all of you to tears but there really isn't all that much thats new in the rumor department from Atari. At least nothing I can verify or repeat. If the weather holds I'll be going down to the Denver Atari Faire and I'll do a short write up for it. So until then try to keep your Ataris out of the suntan oil, it makes the keys all sticky.

Gregg Anderson
Computer Crumudgion at Large.

HIGH-TECH ON THE ST

An Interview with Advanced Systems Architectures

by Terry White

The old adage, "in the right place at the right time", was what happened during the "double whammy" of the Washington blizzards of 1987. Just before the blizzard, as head of the ST SIG for NOVATARI, I was called to see if the SIG could provide loaner equipment to a company from England. It seems that ASA was coming to the U.S. to demonstrate a new software language that would allow the Department of Defense to design SDI ('Star Wars') systems. On the ST? This was just the opportunity I'd been looking for, a professional application of the Atari ST system. Perhaps here was something to convince the rest of the PC world that the ST was a serious contender.

So, I gathered up the equipment they needed and delivered it to Alexandria, Virginia where the demonstrations were being given. During a lull in their setting up, I thought I had an excellent opportunity for an interview, so I plunged right in with my questions. The results are reported below.

Before the questions, however, let me provide some background information. ASA is based in Camberley, Surrey, England. The company, in 1982, was originally a consultant firm, with Goran Hemdal and Chris Williams. Then, in 1984, they set up Advanced System Architectures (ASA), an organization focussing on high-reliability, high-security, real-time systems. The gentlemen I talked with included: Goran Hemdehl (GH), inventor of 'G', mostly; Steven Rhodes (SR), Production Director (tries to pull things together); Mark Riley (MR), Training and Customer Support; and Chris Williams, head of the operation.

TW: What kind of products does ASA develop?

SR: (Software) tools have become a lot more important then when it was originally conceived. It all started around this computer technology which we have titled 'Sofchip Technology'. It is a computer technology intended to be used in real-time dispersed systems (where the computations are done on more than one system simultaneously). Fully distributed, dispersed, an architecture known in the vernacular as a 'multi-stream dynamic parallel processor'. We feel it's the first one of its type in the world.

TW: What makes this unique?

SR: The dynamic parallelism. The fact that the software process doesn't uniquely identify itself with the processor, which actually executes it. It changes around. There is a dynamic allocation, which is overhead free. That's the cunning point, it doesn't cost you any applications time for this. It's quite transparent to the user. The user never needs know about it. ... To design software for such a technology is again one of the weaknesses of many of the so-called 'new' computers. The UK's transputer tried to accomplish this. It was accepted that there was a need for new software tools for the new hardware. That's probably more accepted in Europe in a funny way than it is in the USA. In parallel with this need for design tools, we now have what is called *'Auto-G'*.

TW: What is this event called, your reason for being here?

SR: The SDI SOFTWARE TOOLS FAIR, being held in Alexandria, Virginia. It's intended for a very narrow audience. The military's major research arms, the SDIO.

We will also be attending a show in Tysons Corner in early March sponsored by the Institute for Software Reliability and Maintainability -- a corporation owned by a lot of major companies, mostly American. In fact we will be joining it. This fair is a public one.

TW: How about describing this new language, *'Auto-G'*

SR: *Auto-G* is a graphical and textual design system for systems at large. Aircraft can be designed with this. It is highly likely that this will be used for the horizontal takeoff space plane, at the very conceptual level. There is a textual part as well. Every graphical representation has a textual representation as well. The advantage to that is that people can program in text if they wish, instead of having to use pictures.

TW: And *Auto-G* has no problem with either way?

SR: No. One file can be both. *Auto-X*, which you won't see here, in fact we're not finished with it yet, will allow you to animate the diagrams and check out the designs in a dynamic way. That (*Auto-X*) will be available, oh, probably a year away. It all depends on how quickly we spend our resources on it.

TW: You probably are spending most of your resources on *Auto-G*?

SR: *Auto-G* and the computer. Although we have customers signed up for *Auto-X*, and people who will buy it when it's available, we can only spend money at a finite rate...

TW: I can see why you have so many customers for *Auto-G* (watching it being manipulated by its inventor, Goran Hemdehl.)

SR: What is it, we have thirteen installations, now?

MR: Yes, you're right.

SR: That's doubled in the last month. It's gotten to the point where people are accusing us of being a 'flavor of the month' (with the new language) which, I guess, is a nice criticism. We are also continuing to develop code generators for this.

MR: Our customers are using the graphical interface to input their data. Then they are dumping it textually, and that is their requirement.

TW: You mean they are using *Auto-G* to input all their information?

GH: (it's referred to as) 'Requirements Capture'.

TW: You say *Auto-G* is on a VAX system?

SR: Yes, it's used on all the VAX machines, the MicroVAX, the 785, and the VAXstations. The SUN workstations have it. We also have it on what we call the 'Whitechapel' systems, sort of a SUN-type of workstation. Their outfit is a bit more professional than the Atari people in the UK. Their salespeople have something to sell. Atari really doesn't have a sales force there.

TW: What made you decide to use the ST? You had already developed the system on the VAX and SUN systems.

SR: Well, how it started, we always had a feeling parts of it (*Auto-G*) would fit on a PC like this, but we didn't know. We bought the Atari because it had the 68000 in it which we could use for developing assembly on it, and because we wanted to use DEGAS for making (presentation) slides. It just so happened that we didn't use DEGAS a long way downstream. I don't know quite why.

GH: It was printer problems.

SR: And we didn't sort it out for awhile. We had other things to do. So we started using it for assembly. Then, a crisis on some training courses came up. We thought we'd better get on with it. So we gave it to one of our better guys, who ported it over in two days flat(!).

TW: Oh, from the VAX?

SR: Actually, from the 'C' code. It was the DRI compiler, so it had everything going against it ... (laughter). It worked so well, that it cost us instant commercial embarrassment, as we now had to rethink what we were doing. Goran grabbed me at the door and said, 'Come see this'. But, it did take about three more weeks to actually finish it off. When was that, Mark?

MR: Oh, about September. What was so incredible was the improvement in performance that we got on going to the Atari. We were used to running it on a development machine, heavily used, multi-user.

TW: So you had speed improvements?

SR: Oh, yes! Enormous!

GH: We originally were using dumb terminals, so the minicomputer had to draw the diagram and screen as well.

SR: So that's what happened, just one of these accidents. With everything in RAM or ROM, with no calls to disk... Actually, a proper scientific design could have been done ... I'm ashamed to admit it. (Laughter)

MR: In our defense, we can say it did only take 2 days!

TW: So beside having the enormous speed improvements, you also now have a great training tool. It also has to be cost efficient, too. Do you see serious problems with your application on the ST?

SR: The whole key to solving this problem (of not enough memory, since our semantic checker will work on huge problems) is in 'Networking' -- communications. And that is something that is really the most pressing issue for us to solve. I've been trying to make Atari aware of this. I don't think they quite believe me. I know they're doing an awful lot of work in Sunnyvale on this. We need a background task that we can call from our program. That's what we really need.

TW: Have you found anything else that gets closer to what you really need?

SR: I've followed every alley people have suggested. GEC Computers has done something that is getting nearer. There is also a British company that is building an Ethernet interface for the ST. They've built the hardware. But they need info on TOS, and there have been proprietary rights problems. I don't think they have solved them, yet. They want to make it background-tasking.

TW: Well, with Ethernet, you wouldn't have many speed problems.

SR: Yes, but I think they are charging more for the network node (the ST's interface) than for the entire ST system. I don't think it's the answer, though. With the new ST's, the 'EST's, where there is room to put in plug-in cards, one can envision actually putting in a 'Sofchip' processor, and

having a complete stand-alone simulator system. We couldn't do it on a 1040.

TW: Is it a question of computing speed?

SR: Yes. Well, it's both processor speed and memory. We actually have a separate processor producing data in 'real-time' at a 12 MIPS (Million Instructions Per Second) processing rate. It's a very fast processor. I suppose we could use the very fast data port, but I suspect we'd run out of memory quickly. We just don't know the answers, yet.

TW: Are the 2 meg and 4 meg machines available there?

SR: No, not yet. But they are taking orders for them. We have placed orders. They are giving us a two month lead time for delivery. The blitter is due now! They have accepted our orders. But we can't even solve simple problems like getting empty ROM cartridges for the ST, yet. That's why our cartridges for *Auto-G* are cast in silicon rubber. They say they have 200 cases sitting in Sunnyvale, but someone seems incapable of shipping six of them to us. We are going to put a lot of *Auto-G* into ROM.

TW: I noticed the cartridge hanging off the side.

SR: Yes, the aim is to get as much as possible into the ROM, so we can free up RAM inside the machine, also gives us proprietary control without going to copy protection. This way the customer can actually use this on their hard disk, with their other software. We can put the graphics routines and other routines needing speed in the ROM, neat and tidy out of the way.

TW: So 128K of ROM space is OK?

SR: Their aren't any more address lines, we have no choice. But we can simulate ROM out there using a ram-based emulator. A company called Nexus(?) has their 'RAM/ROM'. costs about $100, including software. They are an English company, kind of small. You usually talk to their answering machine, it's that small. But I would recommend this product. ... it does worry me, this drift in standards in GEM, which could be a problem.

TW: We know that the blitter will cause compatibility problems.

SR: Yes, we know.

GH: I did see a demo of the blitter, and it's fast. They had it at the PC World show last August.

SR: We can't comment on it yet, though. But our software would benefit enormously from it. With the special screen drawing, it would be fantastic. (TW: - I thinks it very good now!)

TW: Do you think the developers are making the software intelligent enough now to know which system is on the ST, so it could install the correct screen drivers?

SR: I understand the drivers are already there. Actually in the GEM. But I'm told they're not very fast, so people chose not to use them. Even though they're advised to use them. The review did mention that there might be a way to 'turn the blitter off'. So incompatible software could work with it.

TW: I think that once more developers see stuff like Auto-G coming out on the ST, they'll start taking it more seriously in the US. Atari still has the problem of the 'game machine' image here in the states, which they are slowly breaking through. But, you say that that doesn't seem to be the case in England?

SR: It doesn't seem to be. It's amazing how many companies, quite independently, have selected this tool for software engineering. We did it, as I said, quite by accident because of the 68000s and it did assembly. GEC (England, not related to GE in the USA) and British Aerospace, to name but two, very significant, very large corporations, have adopted these (ST's) quite independently. And much to our surprise, when we arrived (for our demo), they already had the (ST's) in place.

TW: That's very good to hear. (The Atari ST) is becoming a much more viable, serious product over here. They have just announced their IBM-PC-Compatible.

SR: The dealers should like that, giving them another thing to sell.

Well, that's a small portion of the conversation with ASA. In case you are wondering, they are using Lattice C and the Alcyon assembler for their development work. The word processor of choice is 'Wordwriter ST' by Timeworks. And they love coming to the USA so they can buy the latest software that hasn't hit England, yet.

I would definitely like to thank Goran, Chris, Mark and Steve for their time. Let's hope that other developers read this article and realize that powerful programs on the ST are possible. And practical! For more information contact: Advanced System Architectures, Johnson House, 73-79 Park Street, Camberley, Surrey, GU15 3PE, United Kingdom. Tel. 0276-682756, (int'l +44 276 682756).

By the way, I neglected to mention the cost of *Auto-G* -- approximately $10,000.

ACCENT ON BASIC COMPUTING

Computer Buzzwords

by Ron Peters

As promised, this article will focus on the "buzzwords" (computer jargon) that we all use, but often fail to completely understand. Obviously, there isn't enough space to include every word that you might come across, so I'll stick to the ones that seem to be more commonly used. Also, I am not offering detailed, technical definitions of these words. You can get those from many sources, if needed. Rather, I'll try to put the "buzzwords" into a perspective for the average person. So, here goes:

ASCII: pronounced "askee," refers to American Standard Code for Information Interchange, a standard system of coding numbers, letters, special characters, etc. so that computers can understand each other. Much like the piano and typewriter keyboards have been standardized. The numbers 0 to 127 (a total of 128 numbers, for you see the high-techies start start counting with the number zero!) are assigned to letters, numbers, punctuation marks and graphic symbols. For example, the ASCII code for "A" is 65, and for "a" is 97.

ATASCII: pronounced "ah-taskee," Atari's version of ASCII, where Atari expanded the ASCII base of 128 numbers to 256 numbers so as to include many additional symbols. This is one of the reasons that the Atari computer is so powerful and has excellent graphics.

AUTORUN: usually listed as AUTORUN.SYS (with the SYS standing for "system"). If a properly structured program with this name is on a floppy disk, it will run automatically (or tell the computer to run another program) when the computer is "booted."

BASIC: a high-level computer language (which means people can understand it) and is the acronym for Beginners All-purpose Symbolic Instruction Code. Programs written in BASIC language have to be converted (either interpreted or compiled) into binary format for the computer to understand its instructions.

BAUD: the rate at which a modem transmits data, usually over the telephone lines, and roughly equivalent to bytes per second (bps). Inexpensive modems transmit at 300 baud, whereas the more expensive units go up to 2400 (and higher) baud. Higher baud rates mean less time to transfer data (and lower costs when you are paying long-distance telephone rates).

BBS: a "Bulletin Board System" that is controlled by computer. Users can dial into this BBS using a modem and read or leave messages for other users, get up-to-date information on a particular subject, or download (make copies of) public-domain software. Most local BBSs are a free service, usually run by computer clubs, but others like CompuServe or the Source are commercial ventures and charge by the amount of time you use their service. NOVATARI has its own BBS, called ARMUDIC, which is available to all club members.

BINARY: a numbering system with the base 2 (humans use decimal which has the base 10), using the digits 0 (off) and 1 (on). The off/on refers to micro-switches that control electrical current. Thus a computer with 64K (64,000 bytes) of memory actually has about 64,000 micro-switches. This is the language your computer understands, since it only has two toes.

BIT: one position, or binary number (0 or 1), in a byte. The smallest unit of information storage, and comes from the words "Binary digIT."

BOOT: a term meaning turning on your computer and either loading DOS or some other program to get started. However, the book "Das Boot" wasn't about this.

BUFFER: a shoeshine boy that has specialized, or a temporary place to store data. Some printers have a buffer so you can be working on a new computer task while your printer is finishing your last task. Or, you can purchase print buffers that fit between your computer and your printer for this purpose.

BUG: a "glitch" in a computer program, and as a result the program won't run as expected. Some bugs are easy to find, but others (like cockroaches) are hard to locate and eradicate. Raid and Black Flag won't help here.

BYTE: means big bucks to an orthodontist, but to us it is equal to one character (letter, number, symbol) and made up of 8 bits. For example, the letter "A" looks like this in binary: 01000001. While it would be tough for us to write using this binary code, the computer thrives on it.

CLONE: a term used to indicate that a computer will perform the same functions as another, (usually) more expensive brand computer. You will see the term "IBM clone" used often. Computer "hackers" would like to be able to clone themselves so they won't miss a "byte" when they are sleeping.

CODE: the instructions that make up a computer program. The term "coding" refers to the process of writing a computer program.

COMPATIBLE: like the word "clone," a loosely-used term to indicate that one computer will run the programs of another (again, usually more expensive) brand computer. WARNING -- no two computers are 100% compatible, no matter what any salesman says. If Leading Edge computers were 100% compatible with IBM, you would see one large lawsuit. However, clones or compatibles will

normally run the more popular software programs and thus are acceptable for most people as a less-exepensive alternative to the original computer being cloned.

COMPILE: to translate a higher level computer language into a language the computer can understand. For example, a COBOL program has to be compiled (using a compiler) into machine language (binary) so the computer can understand the instructions. The original program is called the source code, and the compiled program is called the object code. A compiled program runs much faster than a program that has to be "interpreted" by the computer.

CPS: characters per second, usually referring to the speed at which a printer functions. Like "horsepower," this term can be greatly exaggerated; but many dot-matrix printers operate at about 120 cps, whereas a letter quality (daisy-wheel) printer averages about 30 cps. The higher the cps, the bigger the price tag.

CRASH: something that you don't want to happen -- when your computer "locks up" (nothing works) because of a bug in a program you are running, or you have given the computer an impossible task (like digitizing the dimensions of Dolly Parton). The only way to recover is to turn off your computer (power down) and re-boot, losing everything you haven't previously saved to disk. Also, refers to when "hackers," after burning the midnight oil, finally give up and go to bed.

CRT: abbreviation for "Cathode Ray Tube," meaning a computer screen or monitor. Some "hi-techies" call them VDTs (Video Display Terminals). Most of us use T.V.'s for this purpose, but a monitor will give you higher "resolution" (commonly referred to as hi-res and just means a sharper picture), although you won't be able to watch General Hospital on a monitor.

CURSOR: a truck driver talking about a state trooper or vice-versa), or, in computer land, a spot of light on the computer screen (usually blinking) so you'll know "where you're at."

DAISY CHAIN: refers to linking of computer peripherals together in a chain (series) fashion rather than parallel connections. For example, a typical daisy chain of peripherals might be one cable from your computer to your disk drive, and from there to a second drive, and on to a modem, and finally to your printer. Thus, each unit is connected in series (one line) rather than several lines running "spider-web" fashion from the computer.

DAISY WHEEL: a type of printer where the print element is a round, plastic thimble with the letters, numbers, etc., on "spokes." Since the letters are preformed, like a typewriter element, these printers produce type equal to an electric-typewriter (letter quality).

DENSITY: referring to how tightly data is stored on a disk. Atari DOS 2.0 is single density, so that one side of a disk will hold about 90,000 bytes of data. DOS 2.5 is called "enhanced" density (marketing term that means a density about 1.4 times single density), so that each disk will now hold about 130,000 bytes of data. Double density merely refers to packing twice as much data into the same space, much like two pounds of mud in a one-pound bag. If you have Atari DOS 3.0, remove the disk jacket and use it for a frisbee.

DIP SWITCH: for "Dual In-line Package," a series of small switches mounted in one base unit and found on computers and accessories for "setting" the system to a certain configuration. For example, one dip switch on your printer may tell the host computer whether it's an 80-column or 132-colum printer. I wish some of the "dips" I work with had one.

DOT MATRIX: a type of printer, where the print element is a series of wire pins that impact the ribbon in varying patterns to form letters, etc. For example, the letter "H" would be formed by a series of un-connected dots, rather than regular lines printed on paper. Sort of like Xmas lights on a goal post. The more expensive dot-matrix printers have more wires on the print head, and can therefore produce letters with the dots closer together. This results in print nearer to letter quality printing (sometimes called NLQ or near letter quality).

EMPHASIZED: refers to when a printer "double-strikes" or prints over each letter twice to make it darker and bolder.

FAN FOLD PAPER: computer paper that is continuous, with each sheet detachable at a perforated location (perf). This paper is normally pin-fed, that is, there are wholes along each side of the paper to fit over the sprockets in the printer. Thus, the paper is "pulled" through the printer and over the platen.

FRICTION FEED: where the papers feeds through a printer in the same fashion as a typewriter; that is, by friction as the paper is fed through the printer.

GRAPHICS: generally refers to the ability to produce pictures or graphs on a computer (compared to just text). Usually requires a dot-matrix type printer for hard copies.

HACKER: a person that likes to experiment and fool around with computers. The term has taken on a rather negative connotation with all the publicity about computer fraud and the "War Games"-type movies.

HARD DISK: refers to a disk drive with a permanent "floppy disk" that cannot be removed. Generally, hard disks can store much more data than a floppy, and access time (the time it takes to read from or write to the disk) is considerably reduced.

HARDWARE: the physical parts of a computer, the keyboard, disk drive, modem, printer, etc.

I/O: stands for Input/Output, referring to the flow of

data in and out of a computer to the peripherals (screen, disk, printer, etc.).

INTERFACE: a device that fits between two computer peripherals and allows them to talk to each other. On the Atari, an interface is needed between the computer and the printer if the printer is a non-Atari brand. The interface "translates" signals coming from the Atari into signals that the printer can understand.

INTERPRETER: similar to a compiler, except this process is done one line at a time rather than all at once. With a BASIC program, the interpreter reads one line of the coded instructions, translates it into machine language (binary), and then executes the instructions. This process is quite a bit slower than a program that has been compiled completely beforehand.

KILOBYTE: kilo meaning "one thousand," so one kilobyte (1K) = 1,000 bytes (actually 1024 bytes, but let's not get into that). Thus a computer with 64 Kilobytes (64K) of memory has space to work with up to 64,000 bytes of data about 18 pages of text, if you don't count the space that the program itself takes).

MACHINE LANGUAGE: a set of binary coded instructions for a computer. Any "higher level" programming language (BASIC, Action, COBOL, etc.) must be translated (either interpreted or compiled) into machine language for the computer to understand.

MENU-DRIVEN: a computer program where the user is given options through a series of menus (similar to one you'd get at a restaurant, but not as exciting or as expensive). For example, the first menu might give you the option to add, delete or change information. The next menu might then give you (assuming you chose delete), the ability to delete all the information, or only selected parts. Thus, you give the computer its commands through a series of "prompts."

MOD: abbreviation for MODification, and usually referring to a change in an existing computer program so that the original features will be enhanced or new features added.

MODEM: a computer device for sending data, usually over telephone lines, to another computer. Stands for MOduiate-DEModuiate, whereby the device takes computer digital data and converts it into an analog form that is easily transmitted over the telephone lines. At the other end, the modem converts the data back into digital form so the other computer can understand it.

MONITOR: a TV-type output screen used on a computer, except a monitor has a much higher resolution (sharper picture) than a TV.

OS: stands for Operating System, the basic system that fundamentally instructs your computer as to how to act. Without this, your computer makes a nice (but terribly expensive) paperweight.

PARALLEL: refers to a computer handling several bits of information or data at the same time, and thus is faster than serial operations.

PC: a generic term meaning personal computer.

PIN FEED: sometimes called "sprocket feed," where the printer pulls the paper over the roller by the use of sprockets (or pins) that engage holes (in a perforated strip) along the edge of the paper. After printing, the holes can be removed to produce a normal sheet of paper.

PIRATE: a person that makes illegal copies of commercial computer programs, much like making xerox copies of copyrighted materials. These illegal copies are called pirated copies.

PRINTER CONTROL CODES: the codes that a computer sends to a printer to tell the printer when to space, carriage return, change from pica to elite pitch, set margins, etc.

PROGRAM: a series of specific instructions that tells a computer what to do and how to do it.

RAM: means Random Access Memory and is the amount of space in a computer that can be used for programs, data, etc. However, this "space" is volatile, which means that anything in this space is lost when the power to the computer is turned off.

ROM: means Read Only Memory, which is memory in the computer that contains the operating instructions, etc. This memory is not erased when the computer is turned off.

SERIAL: means basically, one at a time, one behind the other, and normally used in conjunction with how data is handled by a computer (one bit at a time).

SOFTWARE: the programs that instruct a computer on what to do, and how to do it, for a specific task. Thus, if you purchase a word-processing program, you are buying the computer instructions that tell your computer how to perform this task.

WRITE: the process of "recording" information, usually on a floppy disk, for later retrieval. However, you will also hear of writing to a printer, which is nothing more than sending information to the printer to produce a hard copy.

WRITE-PROTECT: the process of putting non-translucent tape over the "notch" on the side of a floppy disk. With this tab in place, you can read the information on the disk but cannot change or write new information to it. The same as knocking the tab off an audio or VCR tape to protect the tape from accidental erasure or recording something over the already recorded material. Write protection can also be performed by "locking" a file using DOS, but this is on a file-by-file basis, rather than protecting the contents of the entire disk.

ATARI SCTTLEBITS

Say It Ain't So ...

by Bob Kelly

It was a cloudy overcast day, the year 1919. The newspapers had been preoccupied with perhaps the most infamous scandal of all American sports, the Black Sox Baseball scandal -- a conspiracy to fix the World Series. Soon, the famous Kenesaw Mountain Landis would come on the scene as the first Commissioner of baseball to clean-up the sport. Several baseball stars were implicated in the scandal, the most famous being Shoeless Joe Jackson. Soon after word of the scandal broke, Jackson was walking out of the courthouse, a young kid sitting on the curb stood up and looked at Jackson with tears in his eyes and pleaded "Say it ain't so.... Joe".

It is another cloudy day almost 70 years later, the owners of Atari 8-bit computers are looking to Sunnyvale and wondering if their computers are headed for extinction. Rumors abound, some third party software developers indicate they will no longer market software for the Atari 8-bit computer. Atari, by its own actions, has yet to come forth with the 80-column cartridge, a product it announced months and months ago. It has also failed to bring forth much in the way of new 8-bit software from its once prolific software development house.

In the mean time, Apple announces the new IIGS permitting both 8-bit and 16-bit software to be run on the same machine. Apple user loyalty is reaffirmed. Atari announces an IBM clone. Atari spokesmen, seemingly oblivious to the contradiction, continue to advise the 8-bit owner to wait till tomorrow, a better day is coming.

Unlike the Atari ST, whose ultimate success depends on 3rd party developers, the continuation of the 8-bit computer line now is in the hands of ATARI ITSELF. If it is to continue, Atari must be out front in the development of 8-bit hardware and software as well as vigorously encouraging the production of new programs by third party vendors. Atari, in the form of Jack Tramiel himself, not some spokesman, must step forward and respond to user pleas of "Say it ain't so....." By the way, what would silence imply?

COMPUTER SALES

The Department of Commerce, after almost a year, released data on 1985 computers shipments. Nearly 4 million computers were sold by U.S. manufacturers with the following table showing the breakdown for digital computers only.

On a quantity basis, 76% of the digital computers shipped in 1985 were priced at less than $2,500. However, on a dollar basis, computers under $2,500 accounted for only 14% of the total value of U.S.

1985 Sales of Digital Computers
by US Manufacturers

Price of Digital Computers	No. of Companies	Quantity	Value Million $
0- $500	10	1,158,953	306,245
$500- 1,000	17	1,070,175	655,572
$1,000- 2,500	29	652,511	1,071,641
$2,500- 5,000	27	593,056	2,386,819
$5,000- 15,000	47	176,032	1,557,278
$15,000- 50,000	44	118,973	2,505,968
$50,000-250,000	33	23,799	2,646,811
$250,000-1 million	17	4,746	1,993,629
Over $1 million	7	1,091	1,629,560
TOTALS	179	3,799,336	$14,753,523

shipments. Taking a closer look at the table, it is possible to get some idea of the value of the home computer market to the U.S. economy. Roughly 6.5% of the total value of shipments is represented by computers that sell for less than $1,000. It is indeed a small portion of the pie (Atari's total revenue in 1985 was $142 million). Note the number of U.S. companies. Many U.S. firms are competing against a few much larger Japanese/Korean conglomerates and further consolidation by U.S. firms may be necessary to prosper in this market.

It was also reported that the value of peripheral computer equipment shipped by U.S. manufacturers in 1985 was $18.2 billion.

Nearly 15% of the total $17.4 billion in U.S. manufactured computers were exported - approximately $3 billion. However, the U.S. international trade position in electronic products continues to deteriorate. In 1981, the U.S. had a trade surplus (exports > imports) of more than $6 billion. By 1986, the once trade surplus had become a deficit amounting to roughly $12 billion. This swing of $18 billion has caused alarm and created a rising call for action by Congress to protect our high-tech industries. In the February 9 issue of Forbes magazine Charles H. Ferguson, a former IBM strategic analyst now at the Massachusetts Institute of Technology offered some insightful comments.

"The new semiconductor trade agreement shows this kind of strategic naivete on the part of the U.S. government, and short-term, self-destructive thinking by the U.S. industry. The U.S. industry lobbied for almost exactly the deal they got, limiting Japanese penetration of the U.S. market through exports and putting a price floor on memory chips. The high price gives a windfall to low-cost Japanese and Korean chip makers and helps

big Japanese computer makers, making their chips in-house, while penalizing U.S. firms that buy chips on the open market. The deal didn't ban Japanese direct foreign investment. What the U.S. got was a situation in which the only way that the Japanese could continue to progress was by buying the U.S. semiconductor industry. So Fujitsu just bought 80% of Fairchild. Then Motorola signed a joint venture enabling Toshiba to make 32-bit microprocessors in Japan."

And so it goes.... Will we have a viable semiconductor industry 5 years from now or will even more American manufacturers move abroad? By the way, do you realize that almost 1/2 of Taiwan's electronics output is for captive operations involving such U.S. corporations as Wang and IBM for sale back to the U.S. For that matter, is anybody taking bets that Atari will move its manufacturing facilities back to the U.S.? Stay tuned, of course only if you really believe there is any suspense.

HACKING THE ST-MAC REVISITED

Last month, I discussed a commercial Epson printer driver for the Magic Sac cartridge called *Epstart*. At that time, I said, "Repeated attempts have failed to get it to work". While a correct statement at the time, I have since found I was more wrong than right. To clarify, *Epstart* did not work with my Radix 10 (Star Micronics) printer. In the intervening month, *Epstart* has been tested with the Star Micronics NX-10, Panasonic 1091, and Citizen MSP-20. For all three of these printers, it has produced beautifully formatted output. The problem lies with printer control codes and the degree of Epson compatibility. Printers such as the Radix 10 and Gemini 10X do not appear to be sufficiently compatible with the Epson FX codes to work with *Epstart*.

I also indicated in the February column a major problem was the inability to convert MacWrite 4.5 binary files to ASCII text files. I implied that there was no way to do this short of David Small getting MacWrite 4.5 to work with the Magic Sac. I was right at that time but about 2 weeks ago on GEnie appeared a program capable of transferring MacWrite 4.5 files to ASCII text files. Once in ASCII, the files can be loaded into MacWrite 2.2 or a text editor, formatted, and printed. The conversion program is on *Current Notes'* Magic library disk #M11 (MacWrite to Text). On GEnie the program is named "MacWrite recover", download file #3280 on the Macintosh SIG. Those that use the Mac in a professional setting can now bring text files home and use the Magic Sac.

Till next month!

ATARI'S SMALL MIRACLES
Four Utilities

by Mark A. Brown

This month's column is a utilities column, which in this case means a series of four programs that really didn't fit anywhere else, but could be of use to SOMEBODY out there. They are somewhat esoteric in their use, but if you learn something from them, great. If not, wait until next month. I have grand plans for next month...

PUREDATA

This program actually does have a few uses. What PUREDATA does is convert a disk file to DATA statements to be READ in by a BASIC program. It is called PUREdata because it simply prints every byte; it doesn't strip off any headers or process the data or even make a checksum. It asks you for a file name; type one in, making sure to include the D1: portion. Then it reads in the bytes of that file one by one, prints them on the screen in an appropriate manner, then uses a strange mode of the Atari to make that line on screen into a genuine program line while the program is still running. See the program on how to do it. At the end, the program erases itself and you are left with a series of data statements.

```
0 ? "Ķ File ?";:DIM A$(20):INPUT A$:OPE
N #1,4,0,A$:FOR A=10 TO 32760 STEP 10:
? "Ķ↓↓↓↓↓";A;" DATA ";
1 FOR B=1 TO 25:TRAP 2:GET #1,C:? C;",
";:NEXT B:? "{":? :? "POKE 842,12:NEXT
 A":POSITION 2,0:POKE 842,13:STOP
2 IF B=1 THEN ? "Ķ↓↓↓↓"
3 ? "{":? :? :? 0:? 1:? 2:? 3:? "POKE
842,12:PRINT CHR$(125)":POSITION 2,0:P
OKE 842,13:STOP
```

MINIMODE

the MODE in MINIMODE is the word MODEM with the last M dropped. MINIMODE is a very tiny modem program for anybody with a 300bps modem using the Atari 850 interface (or P:R:Connection by ICD). All this one does is let you talk to the other computer and it talk back to you, no saving of text, no uploading or downloading, nothing else. Being in BASIC it is too slow for much else, and being in the column it would be too long for much else. The only thing you can do is hit SHIFT-CONTROL-T to change the translation mode from 0 translations (when you are talking to other Atari computers) to 2 translations (when talking to other computers, it converts two characters). This is mostly a teaching program, showing how your modem puts and gets data using the concurrent IO mode. If you want more detailed instructions, see your interface manual.

```
10 OPEN #2,4,0,"K:":XIO 36,#1,0,0,"R:"
:XIO 38,#1,32,0,"R:":OPEN #1,13,0,"R:"
:XIO 40,#1,0,0,"R:":POKE 82,0:T=32
20 GRAPHICS 0:? "JabberTalky":POKE 710
,0:? :FOR B=1 TO 2 STEP 0:IF PEEK(764)
<178 THEN GET #2,A:PUT #1,A:NEXT B
30 STATUS #1,A:IF PEEK(747)<>0 THEN GE
T #1,A:? CHR$(A);:NEXT B
40 IF PEEK(764)<>178 THEN NEXT B
50 T=T+32:T=T-64*(T>32):XIO 38,#1,T,0,
"R:":? :? :? (T=0)*2;" translations":?
 :POKE 764,255:NEXT B
```

GCFLCM

Whenever there is a beginning programming class, one of the assignments is inevitably to take two numbers and find the greatest common factor and least common multiple of the two. I think this assignment is really stupid, I have yet to find an occasion when I needed to know that information and I had a computer nearby. But still it is assigned, and it does teach some basic math techniques on a computer, so if you ever get that assignment and have no where to start, just refer back to this column: here, on request, is my version, in a mere two lines.

```
10 ? "Input two numbers ";:INPUT A,B:F
OR C=A TO 1 STEP -1:IF INT(A/C)<>A/C O
R INT(B/C)<>B/C THEN NEXT C
20 ? "The CGF is ";C;" and the LCM is
";A*B/C
```

DUMP1020

Finally, a program for those of you who own Atari 1020 Plotter Printers. If you don't own one, I highly recommend it if you can get it for under forty bucks, it is a great toy to play around with. This program will take any *MicroPainter* screen (or *MicroIllustrater* screen if saved using the CLEAR and INSERT key method), read it in, and print it to the plotter printer. Considering the program is only nine lines, it is quite powerful. It first asks you how you would like the colors. Type

in a number from zero to three to answer black, blue, red, and green. When you hit the color white, you can either type in a number from 0 to 3 (white would replace the color you type in), or hit RETURN if you don't want it. I highly reccomend you use white to replace a color, black most likely, or else your plotter pens will wear down much faster then you would like them to.

Then DUMP1020 will ask for the file name of the picture. Type it in, including the D1:, and it will go to graphics mode 15 and load it in. You need an XL or XE computer for this version of the program, but a little clever programming will eliminate that need. If you don't like the color combinations, hit BREAK, type END to close all channels, then reRUN it, changing the colors.

It takes a while to print the screen, be patient, and when you are done you'll have a four color hard copy of the wonderful artwork you created!

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

Atari's Small Miracles is always looking for good programs to publish in this column. If you have any programs under ten lines long you would like to see in this space, send them to: Atari's Small Miracles, c/o Mark A. Brown, 7097 Game Lord Drive, Springfield, VA 22153. I'll see you next month!

```
10 GRAPHICS 0:DIM COLR(4),A$(20):? "Wh
at color is black (0-3)?";:INPUT A:COL
R(A)=0:? "Blue?";:INPUT A:COLR(A)=148
20 ? "Green?";:INPUT A:COLR(A)=212:? "
red?";:INPUT A:COLR(A)=68:? "White?";:
TRAP 30:INPUT A:COLR(A)=4
30 ? "%File name?";:INPUT A$:CLOSE #6:
OPEN #6,12,15,"S":S=PEEK(88)+256*PEEK(
89):POKE 712,COLR(0):POKE 708,COLR(1)
40 POKE 709,COLR(2):POKE 710,COLR(3):O
PEN #1,4,0,A$:FOR A=0 TO 7679:GET #1,B
:POKE S+A,B:NEXT A:CLOSE #1
50 OPEN #1,8,0,"P:":? #1;CHR$(27);CHR$
(7):FOR C=0 TO 3:A=COLR(C):IF A=4 THEN
 NEXT C:END
60 B=(A=148)+2*(A=212)+3*(A=68):? #1;"
C";B;:FOR Y=0 TO 191:FOR X=0 TO 159:LOC
ATE X,Y,Z:IF Z<>C THEN 90
70 TRAP 80:FOR A=X+1-(X=159) TO 160:LO
CATE A,Y,Z:IF Z=C THEN NEXT A
80 TRAP 40000:FOR D=0 TO 1:? #1;"M";3*
X;",";1-(2*Y+D);"*D";3*(A-1)+2;",";1-(
2*Y+D):NEXT D:X=A-1
90 NEXT X:NEXT Y:NEXT C:END
```

SEARCHING YOUR ATARI'S MEMORY

by Bruce D. Noonan, M.D.

I admit it, I'm compulsive. Sometimes when I am working on the computer, I will spend an inordinate amount of time trying to fix some bug in a program, just to have the satisfaction of doing it the "right" way. The same thing goes for programs I buy. I'll spend the better part of a day trying to figure out how the programmer did something that annoys me, and trying to see if it can be corrected.

For example, there is this arcade type game I like, which plays flawlessly on my old Atari 800. My wife even likes it because of the cute theme and music. I got so good at it that I used to like to start at level 6 (out of a possible 10 levels), and all I had to do was press the "6" key at the start, and I could skip levels 1 through 5. Imagine my annoyance when I got my new 130XE, and the level selector portion of the program wouldn't work. Oh, sure, I could use the translator, but that means dragging out two disks, and it takes more time and effort. All because the programmer took some "illegal" jumps into the operating system to make his code shorter.

What are "illegal" jumps, you ask? No, you can't be arrested for making them (although sometimes I think the programmer should be!). Quite simply, the operating system ROM contains various I/O (Input/Output) routines for interacting with the user. For example, when you type on the keyboard, the operating system recognizes a key press, and then jumps to a routine which processes the keypress. It then may jump to another routine which outputs the character to the screen. Well, when the Atari 800 came out, Atari warned programmers about taking shortcuts and jumping directly to an operating system routine by circumventing the normal avenue through CIO (Central Input/Output). CIO was the "approved" route because it would use the same routines no matter where they were relocated to in any future operating system changes.

Enter the XL/XE series. Most of the "incompatible" software out there is incompatible because the programmer used illegal operating system entry points, which got moved to other locations in the XL/XE's. Usually these routines used the "GETBYTE" and "PUTBYTE" routines referred to as "KGETCH" (63202) in the 800, or "EOUTCH" (63140). It was a simple matter to figure the troubled code probably involved

```
LDA  CH ;$02FC, or 764 (Dec.)
```

Location $02FC holds the internal hardware value for the last key pressed. This is NOT the ATASCII value for the character, though. If no keys are being pressed, it holds the value 255. I got out my trusty DISKEY and searched the disk for the offending piece of code. Disassembling the surrounding code, I discovered that

```
10 REM ┌──────────────────────────┐
20 REM |      MEMSRCH.BAS        |
30 REM | by Bruce D. Noonan, M.D. |
40 REM |                          |
50 REM └──────────────────────────┘
60 DIM FIND$(100),SEARCH$(255),A$(1),B
YTE$(2),DEC(2),DEC$(3)
70 GOTO 800
80 ? "▒INPUT START ADDRESS (DEC.)";:IN
PUT START
90 IF START<0 OR START>65534 THEN 80
100 ? :? "# OF BYTES IN MEMORY TO SEAR
CH ";:INPUT BYTES
110 ? :? "SELECT FORM OF INPUT":? "  A
 HEX":? "  B DECIMAL":? "  C STRING"
120 INPUT A$
130 IF A$<"A" OR A$>"C" THEN ? "↑";:GO
TO 120
140 ON ASC(A$)-64 GOSUB 150,320,490:GO
TO 500
150 ? "▒INPUT BYTE(S) (HEX)":?
160 BYTE$=""
170 FOR I=1 TO 2
180 GOSUB 310
190 IF I=1 AND B=155 THEN POP :RETURN
200 IF B<>126 THEN 230
210 ? "▒";:IF I>1 THEN ? "↑▒";:I=I-1:B
YTE$=""
220 GOTO 180
230 IF B>47 AND B<58 THEN DEC(I)=B-48:
GOTO 280
240 IF B>64 AND B<71 THEN DEC(I)=B-55:
GOTO 280
250 ? "▒INVALID NYBBLE";:POKE 20,0
260 IF PEEK(20)<45 THEN 260
270 POKE 85,I+1:? "                ";:PO
KE 85,I+1:DEC(I)=0:? "▒";:GOTO 180
280 BYTE$(LEN(BYTE$)+1)=CHR$(B):? CHR$
(B);
290 NEXT I:DEC=16*DEC(1)+DEC(2):? "
DEC=";DEC
300 SEARCH$(LEN(SEARCH$)+1)=CHR$(DEC):
GOTO 160
310 TRAP 310:CLOSE #1:OPEN #1,4,0,"K:"
:GET #1,B:CLOSE #1:TRAP 40000:RETURN
320 ? "▒INPUT BYTE(S) (DEC.)":?
330 DEC$="":FOR I=1 TO 4
```

```
340 GOSUB 310:IF I=4 AND B()126 AND B(
)155 THEN 340
350 IF I)1 AND B=155 THEN POP :GOTO 42
0
360 IF I=1 AND B=155 THEN POP :RETURN
370 IF B()126 THEN 400
380 ? "[]";:IF I)1 THEN ? "[]";:I=I-1:D
EC$(I)=""
390 GOTO 340
400 IF B(48 OR B)57 THEN ? "[]":GOTO 34
0
410 DEC$(I,I)=CHR$(B):POKE 85,2:? DEC$
;:NEXT I
420 DEC=VAL(DEC$)
430 IF DEC)=0 AND DEC(256 THEN 470
440 ? "INVALID BYTE!";:POKE 85,2:POKE
20,0
450 IF PEEK(20)(45 THEN 450
460 ? "                    ";:POKE 85,2:
? "[]";:GOTO 330
470 ? :SEARCH$(LEN(SEARCH$)+1)=CHR$(DE
C)
480 GOTO 330
490 ? :? "INPUT SEARCH STRING ";? :INP
UT SEARCH$
500 LD=LEN(SEARCH$):MAX=65535-START-LD
510 IF BYTES)MAX THEN COUNT=MAX:GOTO 5
30
520 COUNT=BYTES
530 SEARCH=USR(ADR(FIND$),COUNT,START,
ADR(SEARCH$),LD)
540 ? :? "          SEARCHING...":? :?
550 IF SEARCH=ADR(SEARCH$) THEN ? "STR
ING FOUND ITSELF AT ";SEARCH:GOTO 580
560 IF SEARCH=COUNT+1+START THEN ? "NO
T FOUND":GOTO 580
570 ? "MATCH FOUND AT ";SEARCH
580 END
800 FIND$="70 FIND$=";FIND$(LEN(FIND$)
+1)=CHR$(34):FOR I=1 TO 67:READ DEC:FI
ND$(LEN(FIND$)+1)=CHR$(DEC):NEXT I
810 FIND$(LEN(FIND$)+1)=CHR$(34):? "[]"
:POSITION 2,3:FOR I=1 TO 78:? FIND$(I,
I);:NEXT I:?
820 ? "60 DIM FIND$(67),SEARCH$(255),A
$(1),BYTE$(2),DEC(2),DEC$(3)"
830 ? "800";? "810";? "820";? "830";?
"840";? "870";? "880";? "890";? "900":
? "910";? "920";? "930"
840 POSITION 0,0:POKE 842,13:POSITION
2,20:? "CONT"
850 POSITION 0,0:STOP
860 POKE 842,12:LIST
870 DATA 216,104,104,133,206,104,133,2
05,104,133
880 DATA 213,104,133,212,104,133,204,1
04,133,203
890 DATA 104,104,133,207,160,0,177,212
,209,203
900 DATA 240,21,230,212,208,2,230,213,
165,205
910 DATA 208,6,165,206,240,20,198,206,
198,205
920 DATA 24,144,227,200,196,207,240,8,
177,212
930 DATA 209,203,240,245,208,222,96
```

the program read a byte from the translation table in the Atari 800 located at $FEFE (65278). But the new XL operating system relocated the table somewhere, and the key value could not be determined. Was I to be doomed to starting at level one from here on? No way! I needed a routine to search through memory to locate the new location of the translation table. Basic was too slow, so I wrote a short machine language routine to do just that--Viola!--MEMSRCH.BAS was born. After booting the TRANSLATOR, I listed the code from $FEFE to my printer. I rebooted my 130XE WITHOUT the TRANSLATOR, and entered some consecutive bytes from my listing into MEMSRCH, and presto, a match was found. The table lay at $FB51 (64337). Since I no longer had my 800, I reasoned that I could change my software by substituting $FB51 for $FEFE on my original game disk with DISKEY, and all would be well. Yep, sure enough, it works--and I don't have to use the translator any longer!

With MEMSRCH, you can locate any string of bytes from location 0 to 65535--the end of the address space. All you need is to use an 800 or the TRANSLATOR to locate some representative code, and then, using the new operating system, enter the code. Of course, the new operating system did more than just relocate some routines. Some of the code was re-written entirely, so you will need to know assembly language and disassemble the code in order to select representative samples to search for. Avoid addresses following a JSR instruction, as they will invariably be different in each OS. Branching instructions may be safe if they are relatively short branches, but longer ones may differ by a few bytes. Code which references fixed locations in page 0 is usually a good bet, as long as you avoid the published changes such as NEWROW ($60,61) and NEWCOL ($62).

With MEMSRCH you can even explore the differences between DOS 2.0 and DOS 2.5. For example, there are two locations in DOS 2.0 ($1082 and $1085) which hold the low and high byte of the directory sector, respectively. Sector 361 is the normal directory first sector. If you

want to make a disk with a "hidden" directory, POKE in the appropriate values from BASIC, save the BASIC program to disk, POKE in the original values, and you have a new directory sector, hidden from users of the unmodified DOS. When you want to RUN the hidden program from another BASIC program, simply poke in the hidden sector low and high bytes, followed by the command

RUN "D:PROGRAM"

I'll leave the exercise to you to find where the same code is located with DOS 2.5.

Several things are necessary to know about running MEMSRCH.BAS. When prompted, enter the starting address in memory from which to begin your search. Next, enter the number of bytes to search through. Don't worry about entering too great a number. MEMSRCH won't let you try to search beyond 65535. You may enter up to 255 search bytes in any one of three forms: (1)Hexadecimal, (2)Decimal, or (3)String. A [RETURN] without characters signals the end of input. If you use the string method, be aware that you cannot enter a RETURN character (Dec. 155) in the string. Also, when using this option and searching low memory, you will always locate address $0580 (1408) which is the BASIC input line buffer. It finds a match with the string you just INPUT. Also, with any of the entry methods, the search string will match itself when it encounters the string/array area of memory where BASIC stores dimensioned strings, and again, where the string is located within the BASIC program. When this occurs, re-run the program starting at the next higher address. Use shorter search strings of 3 to 5 bytes for optimum chance of finding a match. With long search strings there is a higher probability of not finding a match, since a difference of only one byte will negate a match.

After typing in the program listing, and BEFORE running it, SAVE it to disk with the filename "D:TEMP". Then RUN the program. It will modify itself and write the machine language code into a string called FIND$, and will remove the data statements. Then it will list itself to the screen. At the bottom of the listing are two last statements which need removal. Type

850 [RETURN]
860 [RETURN]

to delete them, then SAVE the new form of the program to a file called "MEMSRCH.BAS".

==========

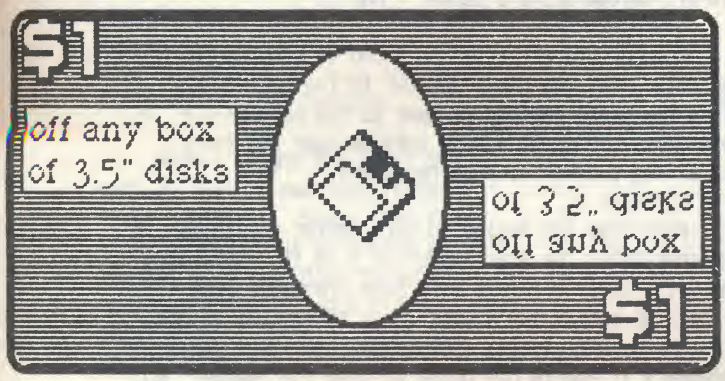
```
10 ;Search routine which finds a
20 ;match in memory of data string
30 ;SEARCH$.  COUNT is number of
40 ;bytes to Search through, where
50 ;
60 ;       COUNT=65535-LD-START
70 ;
80 ;LD is length of search
90 ;string (255 bytes maximum), and
0100 ;START is the starting address in memory to
0110 ;search from.  Function accessed from BASIC by
0140 ;    SEARCH=USR(ADR(FIND$),COUNT,
0150 ;    START,ADR(SEARCH$),LD)
0170 ;SEARCH contains the address found and the
0180 ;following routine will be contained in string
0190 ;FIND$
0210 ;   By Bruce D. Noonan, M.D.
0250 ;
0260 STARTL  =   $D4          ;address of
0270 STARTH  =   $D5          ;string A$
0280 SRCHLO  =   $CB          ;address of
0290 SRCHHI  =   $CC          ;SEARCH$ to be matched
0310 COUNTL  =   $CD          ;# of starting bytes to
0330 COUNTH  =   $CE          ;check.
0340 LD      =   $CF          ;LEN(SEARCH$)
0360 ;
0370         *=$0600
0380         CLD
0390         PLA              ;DISCARD # OF STACK PARAMS
0410 ;                         PASSED
0420         PLA              ;Set up param
0430         STA     COUNTH   ;addresses
0440         PLA
0450         STA     COUNTL
0460         PLA
0470         STA     STARTH
0480         PLA
0490         STA     STARTL
0500         PLA
0510         STA     SRCHHI
0520         PLA
0530         STA     SRCHLO
0540         PLA             ;DISCARD HI BYTE LD
0550         PLA
0560         STA     LD
0570 BEGIN   LDY     #0
0580         LDA     (STARTL),Y  ;Y=POSITION
0590         CMP     (SRCHLO),Y
0600         BEQ     MATCH
0610 ADVANC  INC     STARTL
0620         BNE     LOOP1
0630         INC     STARTH
0640 LOOP1   LDA     COUNTL
0650         BNE     LOOP2
0660         LDA     COUNTH
0670         BEQ     EXIT
0680         DEC     COUNTH
0690 LOOP2   DEC     COUNTL
0700         CLC
0710         BCC     BEGIN
0720 MATCH   INY
0730         CPY     LD
0740         BEQ     EXIT
0750         LDA     (STARTL),Y
0760         CMP     (SRCHLO),Y
0770         BEQ     MATCH
0780         BNE     ADVANC
0790 EXIT    RTS
0800         .END
```

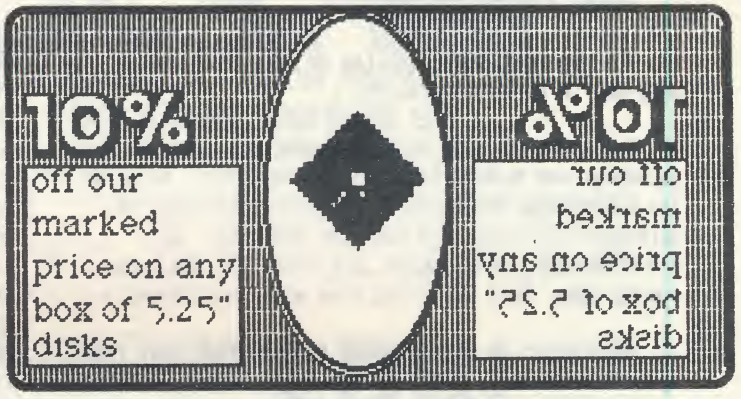
==========

COMING SOON

A NEW LARGER STORE

STILL IN SEVEN CORNERS!





Limit of one per household. Valid only for subscribers of Current Notes. You must present your issue with your mailing label to use these two coupons.
Offer expires March31, 1987.

Last chance.

Atari raised their wholesale price at the start of the year for all XE equipment. This offer ends April 1st.

Atari 65XE for $59.96
Atari 130XE for $98.00
with
the purchase of any four
Atari Cartridges.

Due to the nature of this offer we reserve the right to exclude certain cartridge titles, though we do not anticipate doing so.

Diskcovery

Diskcovery
Seven Corners Center-Falls Church, VA 22044
Hours: Mon-Sat 10-9, Sun 12-5
Call (703) 536-5040

THE SAGA OF YAP

by Dave Small

I want to make it clear at the very beginning of this article that I'm a dog lover. Grew up with three German shepherds. I get along with dogs just fine.

Except for the one next door.

The dog next door, Yap (as we call him), has a problem: he barks constantly.

Beginning at 5:30 in the morning, he barks at the paperboy. At 6:30, at the cars driving by. At 8, at the schoolkids walking by. Throughout the day, at airplanes overhead. He barks at anything. By mid-afternoon, he's hoarse, but ready for the kids coming home, cars returning from work, and so on.

Generally, he stands about fifteen feet away from my bedroom window, right at the fence corner, and opens up. Yap, yap, yap.

I can't tell you how many times I've been woken up by this little charmer. My kids (3 and 4 years old) used to come running downstairs to announce that they were scared of the dog.

So, I began to plan.

Evil plots flitered through my mind, which I won't mention to keep from further tarnishing my good name. You can imagine what I thought of doing, those mornings I'd stayed up until 2 AM working on the Magic Sac, when Yap would start in at 5:30.

One day, as I stood in the shower listening to Yap (it's a particularly penetrating bark that can be heard while one is in the shower), I had this idea on how to stop him from barking. I did it, it worked, and I thought I'd tell you about it. I can't be the only person with a barking dog problem.

Fittingly, I cured Yap with an Atari computer. Here were my components:

(1) one Atari 800 computer, which had (in truth) mostly been gathering dust, with Basic cartridge. No disk even needed.

(2) one 5-pin DIN connector, from Radio Shack ($5)

(3) one Kenwood KR-4070 40-watt amplifier, from my college days, which had also been gathering dust.

(4) one Radio Shack piezoelectric tweeter, 40 watt, about $15.

(5) one RCA phono plug & cable (cut one end off), from Radio Shack. $2.

Wire the DIN connector with pin 2 (the big one) to the RCA cable's ground, and with pin 3, the AUDIO OUTPUT, to the cable's center ("hot").

Connect the Atari to the PHONO IN plug on the amplifier, and the piezo tweeter to the SPEAKER OUT. Place the piezo tweeter as near to Yap as possible, in this case, hidden by a bush outside near the fence. Run a long speaker wire as necessary.

Next time Yap begins to bark, enter the SOUND commands using the Atari: SOUND 0,1,10,15. This sets channel 0 (the "0") to a very high frequency (the "1") -- so high people can't hear it -- at maximum volume (the "15"), with little distortion (the "10") (which is necessary if you're not going to blow the tweeter; you don't want square waves or the like).

Turn the amplifier to about "8", or until clipping occurs. (Clipping is where you're pushing your amplifier too hard, and it starts putting out DC. DC fries speakers. If you don't have an oscilloscope to detect it, the only way to prevent clipping is not to turn up your amp too loudly).

You won't be able to hear the sound being made, because it's too high of a frequency; it does make your teeth itch, however. (If you'd like to hear what the dog hears, drop the frequency a bit, something like SOUND 0,10,10,15. Piercing, isn't it?)

The dog, on the other hand, has no problem hearing this frequency (which is how dog whistles work), and at this point, ceases barking, wonders what on earth is going on, and beats a retreat back inside his house.

At this point, shut off the amp.

After three weeks of this or so, we had Yap well trained. Not a peep came out of him, because every time he barked, he'd get 40 watts of high frequency in the ear. I used to get up at 5 AM, drink coffee, and await the paperboy, my finger on the volume control. I must confess to evilly grinning, too. All those mornings he woke me up...

These days, he doesn't require much training. Perhaps once a week we have to remind him not to bark. He's a quiet dog now.

Best of all, our neighbors never heard a thing. All of this happened at a frequency far too high for them to hear. That's the real beauty of this solution.

Well, that's the story of how I cured Yap, using an Atari computer as a frequency generator. If you

have a similar problem, you probably have most of the components on-hand to solve it; twenty bucks worth of electrical parts is well worth a little peace and quiet. Remember, if you do this, that the object isn't to hurt the dog, it's to make him a bit uncomfortable while he's doing what you want to train him out of. You have to remember to turn the sound off when he stops barking.

When I bought the Atari 800, back in 1981, I was told it was a "home computer". Since that time, there's been a lot of debate as to whether or not a "home computer" is actually useful. I don't debate the point anymore; mine is worth its weight in gold.

I get to sleep in these days.

-- Dave Small

BATTLE BYTES
WARSHIP, by SSI

Review by M. Evan Brooks

WARSHIP:
PUBLISHER: SSI
DESIGNER: Gary Grigsby
PLAYERS: 0-2
PRICE: $59.95
RATING: ***

WARSHIP is the latest release from SSI's Gary Grigsby. A "tactical game of surface combat in the Pacific, 1941-1945", *WARSHIP* may well be described as "*KAMPFGRUPPE* Goes to Sea". Aside from the four included scenarios, the product includes a design-your own option. While not as flexible as one would hope, *WARSHIP* still permits one to recreate any major Pacific surface naval action. The disappointment lies in the rigidity of the design options -- twenty-four gun types are included in the game; while this is sufficient for Pacific World War II naval actions, a little more initiative (with regard to gun types, armor and magazine vulnerability) would have allowed one to design surface combat from any 20th Century period (e.g. Russo-Japanese War's Tsushima, World War I's Dogger Bank, Falklands, Jutland).

For anyone familiar with *KKAMPFGRUPPE*, *WARSHIP* will be familiar territory; this is both its strength and weakness. Graphics are barely adequate, and oftentimes resemble "Strike of the Seaborne Spermatazoa" from Biology I rather than an actual naval action. However, one can learn to live with the graphics; it is the meat of the program that may prove more difficult to digest.

That is not to say that *WARSHIP* is an unacceptable game. The problem with *WARSHIP* is that the documentation is inadequate for the vast majority of gamers. While Mr. Grigsby offers four scenarios (Guadalcanal I and II, Augusta Bay and Leyte) and sufficient numbers of ships (including British and Dutch), anyone not intimately familiar with surface naval warfare will not know where to begin. Scenarios may be easily created and modified; the difficulty is in discerning the historical accuracy and tactics of that situation in order to gain a valid appreciation of the era.

Nowhere in the documentation are surface naval tactics explained; a brief mention is made of "Crossing the T", but the effect thereof is buried within a mass of combat modifiers. Actual combat results are applied in so arcane a fashion as to leave it beyond the capabilities of the only mildly-interested. Combat results are noted by point of impact and penetration or flotation damage; near misses will often cause penetration damage. What exactly does this mean? A near miss should not be penetrating armor; on the other hand, a near miss could well cause rivets to pop loose and structural damage to occur. The documentation does not address the point.

Of course, *WARSHIP* is rated as an advanced simulation. But *KAMPFGRUPPE* was similarly rated, and the documentation offered operational and tactical guidance, all of which is sorely missing in *WARSHIP*.

WARSHIP does have some interesting features: (1) Movement may be done by individual ship, or by Division Mode. By permitting the player to "shift his flag" between an individual captain and an admiral, one can gain a certain appreciation of much that is happening. Even more important is the fact that a damaged ship in line can fatally slow down an entire division. Quick individual adjustments may be made to have that ship shift to another division and fall safely to the rear. (2) Turns do not occur in regular sequence; action is continuous unless the player wishes to add (O)rders by depressing the "O" key at certain times. This has the effect of allowing the battle to proceed efficiently and fluidly, with player intervention only as necessary. (3) Torpedoes present an interesting dilemna in *WARSHIP*. Players utilizing Division Mode can best leave torpedo firings to the "computer" captains. On individual mode, one must determine "slow" or "fast" speed settings and then determine the angle of intercept. Unless the player is an Annapolis graduate, this reviewer recommends leaving torpedo firings to the experts (i.e. the computer).

Victory conditions are somewhat nebulous. A point differential tells a victor, but nowhere is any differentiation made between a marginal victory and a decisive conquest; gross numbers of points will tell something, but the documentation could well have supplied the historical results as a guide.

Whether or not *WARSHIP* is an accurate simulation is unknown. Too much information is hidden within the program; an overall recommendation would be for the dedicated naval buff, but for the only mildly-interested, this product will not peak your interest or answer any questions.

There are few naval simulations available for the Atari; this is not true for other machines. Both Commodore and Apple are well represented by Simulation Canada and SSG's naval offerings. Thus, *WARSHIP* does indeed fill a niche; the question remains whether the broader base of wargamers will find sufficient interest to retain their interest. The rating for *WARSHIP* has

been tempered by the naval *grognards* that really enjoyed the product; those with a broader-based interest did not find it nearly as entertaining.

By May, SSI plans to release BATTLE CRUISER, the sequel. With scenarios from World War I (supra) and World War II (the Atlantic actions), this obviously hopes to build on *WARSHIP*'s base. This reviewer's hesitancy is occasioned by the fact that minor revisions of the design parameters herein would have rendered the sequel superfluous. From a marketing perspective, SSI's attitude is understandable -- maximization of sales through two products. However, from a gamer's perspective, one quickly reaches a point of diminishing returns.

FROM THE TRENCHES: *GUNSHIP* by MicroProse has been released for the C-64/128. Despite what MicroProse marketing personnel are saying (i.e. it will be out for the 8-bit Atari in May), the design staff denies this "rumor". MicroProse has not shelved the 8-bit Atari conversion permanently; however, it is on a low priority. People, *GUNSHIP* makes *F-15 Strike Eagle* seem childish, and has a more visceral appeal than *Silent Service*. This reviewer has spent over 200 hours on the Commodore version; a "five-star" product, it would be a shame never to see the Atari 8-bit version.

Of course, this points out a trend. New products for the Atari, especially in wargaming are becoming fewer and further between. This reviewer had to secure a Commodore in order to stay abreast of the wargame market, and the acquisition of an IBM-clone is not far off. Remember, Atari is the machine that accomplished the breakthrough wargame (*Eastern Front*). As far as the 16-bit machines go, no true breakthrough game has yet appeared. But in terms of simulation gaming, we Atari owners seem to be the Army Group Center . . . it is late 1944, and the Offensive is about to begin...

CONSOLE KEY FIX - 130XE

The following fix for intermittent or complete failure of the HELP, START, SELECT, OPTION and RESET keys comes from an ATARI Technical Advice Notice dated July 25, 1986

According to ATARI, the problem is caused by excessive voltage drop in the keyboard and the keyboard connector (J8). This is caused by oxidation or contamination of the metalization film on the flex circuit. (Ed. note: See article on 130XE keyboard fix elsewhere in this issue for information on disassembly of the CPU and removal of the keyboard flex circuit.)

The ATARI recommended fix may be accomplished by proceeding as follows:

1. Remove the flex circuit from the edge connector (J8).

2. CAREFULLY remove any oxidation or contamination from the metal film (side with circuits in black). DO NOT USE EXCESSIVE FORCE, AS THIS WILL DESTROY THE TRACES.

3. Shim the non-conductive side of the flex circuit (silvery colored side) with any material. It should be .002-.010" thick (scotch "magic" transparent tape will work).

4. Remove R95; a 220 Ohm resistor connected to pin 2 of J8.

5. Replace R95 with a 1K Ohm 5% resistor.

6. Replace shield and reinsert flex circuit to J8.

7. Reassemble and test keyboard and computer functions.

The cleaning and shim will minimize the recurrence of the poor contacts. The resistor change lowers the LED drive current and thereby reduces the voltage drop across the poor contacts thus eliminating the problem.

CLASSIFIED ADS

WANT: To hear from anyone who's actually won Koronis Rift. I've tried for months and never get past Rift 5. I know about the Epyx hing for a good shield at Rift 3. All letters answered! Rick Ferranti, 116 Franklin St., Arlington, MA 02174.

WANTED: ST Monochrome Monitor. Will consider buying or trading with 1200 baud modem, original software, blank disks, or other items. John Yoh, 10817 Martindale, Westchester, IL 60153.

FOR SALE: Atari 1025 Printer - excellent condition w/extra ribbons - $75.00; Magnavox 80-column monochrome composite monitor - $45.00; Atari 1010 Program Recorder - $10.00; SynFile+ and SynCalc software with documentation - $10.00 each. Call Steve at (703) 250-8511.

FOR SALE: inoperative 800XL, with power supply. Back issues of Antic (NOV. 1985, Jan.-Aug. 1986) and Analog (Dec. 1985, Feb.-Aug. 1986). Call Robert Vider at (202) 682-6147 days and (301) 464-2778 evenings and weekends.

FOR SALE: Atari 520ST, color monitor, single disk. TOS ROMS, 30 disks, many various programs. Also PANASONIC KX-P1080 printer, NLQ, various type styles, tractor/friction feed, cable and paper included. Will include large O'Sullivan computer table and some books. $875 negotiable. Day (301) 523-1673 X70, evenings and weekend, (301) 890-4340, Keith Van Hulle.

ADVENTURES IN THE MAGIC SACDOM
Getting Started with the Magic Sac

by Jeff Greenblatt

I have decided (with a little nudge from Joe Waters) to write this column, devoted to the use of the Magic Sac, so that all can benefit from my many hours of experience with the Mac emulator. I have spent every spare minute, which somehow blossomed into hours (abandoning my wife and children), experimenting with the Magic Sac and literally, hundreds of Shareware and Public Domain programs. The past two months have been both frustrating and rewarding. Most of the Shareware/PD programs I have tested have been placed in the *Current Notes* ST-Magic Library. The intent of this column is to educate, so let's begin.

520ST VS. 1040ST

If you own a standard 520ST and are thinking about buying a Magic Sac, DON'T! If you already own both, have your 520 upgraded to 1-meg. I'm recommending this because when the Magic program is run, you are given a choice of a 128k or 256k system. Since the 256k version of the Mac never made it to the retail market, some programs check memory size and assumes that if it's not 128k, then it must be 512k. Therefore, the application may bomb. This leaves you with 128k as your other choice. This size system, in my opinion, is too restrictive for serious applications. Additionally, Finder 4.1 was designed to run on the 512k Mac and runs erratically on the smaller 128k and 256k system configurations. Apple recommends using Finder 1.0 or 1.1g on the 128k Mac (256k too). I have not been able to locate these versions of the Finder to test them. So I can't report on how reliable they are. More about the Finder later.

MONOCHROME VS. COLOR MONITORS

Now that you have upgraded your 520 to 1-meg, you can run your Magic Sac with a color or monochrome monitor. This assumes that you have version 3.5 of the Magic program. If you don't have it, it's available as an ARC'ed file on Compuserve or Genie, or it can be purchased from the *Current Notes* library. Version 3.5 only supports color if you have a 1-meg ST. Additionally, color will only work if you configure the system for 512k. It locks up if you configure the system for 896k. I have experimented with the ST's control panel to produce the sharpest color image and have found that the following settings will produce the best overall picture quality:

COLOR	R SETTING	G SETTING	B SETTING
White	7	7	7
Black	0	0	0
Red	4	0	0
Green	0	3	0

However, if you intend to run any serious applications, a monochrome monitor is a must.

You can also adjust the brightness and contrast controls on the monitor to produce the best image possible. After you have made the settings noted above, save the desktop to your disk which contains the Magic program. If the settings were made correctly, the background color of the screen should be a very muddy green. Also make sure the CONTROL.ACC file is on this disk so that whenever the disk is booted, the control panel will automatically set the background color for Magic Sac use. Incidentally, don't trash your 3.0 version of the Magic program. I have found at least one useful utility (Desk Accesssory Mover) which bombs with the 3.5 version.

DISK DRIVES AND THE SYSTEM DISK

Currently, the only disk drive supported is a single sided ST drive; it doesn't make any difference what kind of drive you own. Hopefully, the double sided ST drive will be supported in the future, or even better, a Mac type drive will be available which will solve the copy protection problem of using some commercial software. If all you have is one drive, be prepared for a lot of disk swapping. A two-drive system is preferable, although there are several pitfalls that one can fall into which will cause disk swapping with two drives. This will be discussed in a future issue of this column.

The System Disk (Startup Disk) usually must contain a System Folder. The System Folder for Finder 4.1, as distributed by Apple, contains six files which consume approximately 159k of disk area. Since a blank formatted disk contains 399k of free area, this leaves 240k remaining. Not too much, is it? Depending on what applications you intend to run, the System Folder can be reduced in size considerably. The six files in the System Folder are as follows:

FILE	SIZE
System	80k
Finder	47k
Note Pad	2k
Clipboard	3k
Scrapbook	1k
Image Writer	25k

The minimum System Folder needed to boot the Mac must contain the System and Finder files. So, if all the other files are trashed, this leaves 272k of free area on the disk.

The System file is needed to start the Mac and also contains resources such as fonts and desk accessories. The Finder file is responsible for file organization. It basically controls file housekeeping and is needed as an entrance and exit to applications and can not be reduced in size unless an alternate Finder is used. Alternate Finders will also be covered in a future issue.

The System file is the largest file in the System Folder and can vary in its size. Its size is a function of how many fonts and desk accessories it contains. The System file for Finder 4.1 normally contains seven desk accessories and eight fonts. Potentially, if all the desk accessories and fonts were removed using DA/Font Mover 3.2, approximately 44k of additional free disk area would be available. Then, ideally a minimum System Disk could contain 316k of free area.

I'm not recommending that you immediately start stripping all the desk accessories and fonts from your system disks, the Finder won't let you do it anyway. The System file must contain at least one desk accessory and four fonts are reserved for system use which can not be removed (Chicago 12, Geneva 9, Monaco 9 and New York 12).

For most applications I recommend that the System Folder contain a printer driver such as the Imagewriter File (if you intend to print), the Finder and a System file with the Control Panel as the only Desk Accessory. If there is a font that you don't care for in the System file, then remove it. Use Font/DA Mover 3.2 to do this. The only problem with Font/DA Mover is that when fonts or desk accessories are removed, there is no way to recover them. You can create resource files of fonts or desk accessories as they are being removed for future use. Use Desk Accessory Mover (with Magic 3.0) and Font Mover to create resource files.

RUMORS

Look for the final 4.0 version of the Magic program by the time you read this. Also, in late March the Mac-type drive should appear.

TIPS

Has anyone found the hidden dedication page yet? Try clicking the mouse in the area around the MAGIC button. You are looking for an invisible button.

RELAX AND ENJOY

by Joe Kuffner

Welcome to this month's relaxing notebook of entertainment software, in which we will turn off the business applications, and turn on the enjoyment. Take off your "thinking cap", relax and see what's new in the offing.

I'll be reviewing a new animated adventure from Star Soft Development Laboratories, Pirates of the Barbary Coast. Also, I'll turn your attention to inexpensive entertainment software. Namely public domain (available from your user group or BBS) and "Magazineware" (not necessarily public domain).

PIRATES OF THE BARBARY COAST

"Arr, Billy, ever 'bin to sea?". Welcome to the pirate-ridden coast of Northern Africa during the late 18th century. You are the captain of the American Star, a 15 cannon, trading frigate. While docked at Casablanca, your daughter, Katherine, has been kidnapped by Bloodthroat the Pirate. Your mission: sail the high seas in search of your daughter's kidnapper and pay the 50,000 gold piece ransom within thirty days (or its to the slave market with Katherine). In your quest you will have to raise money at commodity exchanges at various ports and discover a hidden treasure on one of the islands.

The program boots up in low resolution only, with a picture of your prized treasure map and a warning that your quest for the treasure may be fatal. The main map of Northern Africa is then displayed with the ports of the Barbary Coast, so named because of the rampant piracy along it. As mentioned, you are docked at Casablanca, with your crew, 5,000 gold pieces and a mish-mash of trading commodities. Your first mate is awaiting your sailing command.

After setting sail for either another port, or an island, you will undoubtably be attacked by a pirate ship. As the documentation points out, all ships are fair game for attack by pirates. These pirate ships have on board useful booty, and perhaps useful information in the ships log. If you are able to sink the pirate ship, by blowing it out of the water with your cannons (no MK 42's in this period), you will briefly be able to board the enemy ship and salvage EITHER the log OR the booty. I'll get into this a little bit later. Did I mention that you have to load the cannons, while under attack? To do so, you must follow a rigid procedure (a 10 point effort, in all) covered clearly in the reference material on disk. Did I also mention that sustaining damage to your ship includes the loss of cannons AND men? It does! Better gain experience in firing your cannons, including figuring distance and timing your fire. Remember that the best defense is a strong offense. Surprisingly, after one or two battles, the loading and firing procedure is quite natural.

Having gained information or loot on your trek, you now reach port, where you are confronted by the local trading master. You are first given the option of selling, then the option of buying. However, you may only buy OR sell each of your commodities, not both. Now, at certain ports, some items are valuable, while others are not (similar to today's stock exchanges). its up to you to figure out when to sell and when to buy (by reading pirate ship log books, maybe?). You may dicker prices, but be careful. Greedy captains have been known to blow the deal of the century!

The commodities in which you will be trading include tea, silk, muskets, medicine, cocoa, wool, tobacco, and rum. The prices change often and to a great extent. The value of the items change rapidly in accordance with supply and demand! Also, prices at the same port for buying and selling may not be the same. Good judgement and a trading instinct will take you places. After all, you are the captain of an American trading ship.

After completing the trading process, you can enter the town to buy men (men are considered supplies, but might as well be used as cannon fodder, and you need at least 16 to safely set sail), food, cannon balls and powder. Also, you may have your ship repaired, after sustaining damage on your voyage. Remember, that you are in a free enterprise system and as a result, ports do not all charge the same for repairs and supplies. Be thrifty, unless you're desperate. Finally, at your port stop, you may choose to bribe the trading master, to get a tidbit of "inside" information on what commodities are selling well at any of the ports or a clue to the hidden treasure. I assure you that the info does not come cheaply, and is not always reliable. (Note that you get this info AFTER completing your trading at this port.) You may now set sale for another port or head to the islands.

The game is played entirely using the mouse for issuance of commands, using both buttons. My initial reaction to the mouse movements was that it was "choppy", but after devoting hours and hours to this addicting adventure on the high seas, I got used to it. While I'm on the subject of playability, I'll mention a couple of nuisances. First, there is no game save feature. Since the game is different each time you play, you must complete your mission or be sunk in one sitting. So far the latter is all that I've been able to accomplish. The second is that while in battle, there is no pause feature. You must either complete the fight or head for shore. This is unique, because your only source of income is from sinking the pirate ships, or clues to the hidden treasure in a similar matter.

So, heading for shore, in order to pause the game, is not always feasible. However, these points are minor enough that they don't affect the enjoyability of the game.

One battle that I haven't mentioned is that with Bloodthroat himself. If you do wish to attack him, make sure that you have all cannons loaded and you have him broadside, as a minimum. So far, I've yet to defeat him. A word to the wise: Avoid him, until absolutely necessary to engage him in battle.

I hope I have given you a brief taste of this game program. I found it to be an excellent combination of thinking (trading), action (the battles), strategy (trading and choosing log books or booty), and relaxing entertainment. I wholeheartedly recommend that you add this animated adventure to your entertainment library. Ahoy, mate!

PUBLIC DOMAIN AND MAGAZINEWARE

Inexpensive sources of computer entertainment are public domain software and magazineware. These two "categories" of programs provide users with quality, underrated software. As an example, the Current Notes (and NOVATARI) public domain library has over 100 disks, with over one-quarter containing games of some sort. Everything from arcade games to parlor games to adventures are available. Further, the WAACE BBS has dozens of games available for downloading. I warn you, not all of the programs are top quality, but many are. Of course, many magazines (both print and disk-based) also publish solid entertainment software. Remember the slogan, "Power without the Price". As excellent programs "pop-up" in these areas, I'll try to keep you abreast of them.

A few interesting programs that I've found lurking in the public domain library are *Krabat Chess*, *ST Aggravation* and *Flight Simulator Scenarios*. In the way of magazineware, two examples of excellent selections are *Checkers* and *Poker*, both from the faSTer Disk Mag, published in Canada.

KRABAT CHESS

This chess program, a German effort, programmed by Ulf-Esder Schmidt, working in both color and monochrome (version 1.1) is a GEM-based computer chess simulation. Seven levels of difficulty are offered, with moves of five seconds to ten minutes. Any combination of player-computer is available (i.e two players, computer vs computer, etc.) The program allows the editing of the board layout and keeps a record of play. Other features include taking back moves, rewards for good moves, and the computer's ability to concede when it is backed into a corner. Fine graphics, and excellent play make this a winner. However, be patient while learning the program. Many of the menu items are in German, and will require some experimentation. For free!

FLIGHT SIMULATOR SCENARIOS

Six new scenarios for your enjoyment while playing *Flight Simulator II* from SubLogic. These were compiled and arranged by Ian Chadwick. Documentation is included and outlines how to integrate them into your FS II game. You'll have the opportunity to fly VERY challenging routes as well as moderate and simple ones. Variety is the key, here. Consider landing in Central Park, taking off from the Golden Gate Bridge, or flying into Canada. Dozens more too. Free!

ST AGGRAVATION

Programmed by Brent McKimm, this public domain game is a cross between chinese checkers, Sorry, and Parcheesi. The game plays swiftly with the computer playing any or all of your opponents. Other players may play, too. The game is fully GEM-based and offers several help screens for the objective and rules. I found the game very challenging (because of the various move possibilities) but still entertaining. It works only in low resolution. Source code is available from the author who will also accept donations. Shareware.

POKER

This simulation of a slot poker machine is available in the Nov/Dec 86 issue of faSTer Disk Mag. It works both in mono and color and uses the mouse for coin transactions and card selection. The simulation is so authentic, with excellent graphics and sound, that you often feel that you are in Vegas playing on a real poker slot. Very entertaining. Disk Mag available for $7.

CHECKERS

Very few gamers appreciate the level of strategy in the game of checkers. This probably has something to do with playing the game as children. Well, this program certainly takes it seriously, offering seven levels of strategy with moves taking between five seconds and eight hours. I lose regularly at the simplest level (I suppose that doesn't say much for my skill at checkers), but I've noticed a substantial improvement to my game after playing and studying the computer moves. The program runs in either mono or color and is available in the faSTer Disk Mag, Jan/Feb 87, for $7.

Well I hope you take advantage of your BBS or information service, or your club's public domain disks. Relaxing in front of your computer shouldn't always cost a lot of money. Magazine and public domain software is evidence of that. Simply be picky with your choice, just as you would when purchasing commercial software. Then again, quality software is worth the price.

THE KARATE KID PART II
A Fine Addition to Anyone's ST Library

by Dan Greenblatt

Since I disliked the movie The Karate Kid and still do, it made no sense to me why they should have made a sequel. I also saw no sense in why Microdeal (Michtron is the U.S. distributor) should have made a game out of said sequel. Well, I was surprised that out of the three, I truly like *The Karate Kid Part II -- The Computer Game*. (Yes, that's the entire title!)

The gameplay is that of a kind of tournament, working your way up from Toshio (level one) to Chozen (level five). Each martial artist is given nine strength points. The object is to reduce your opponent to zero any way you can. If you are reduced to zero, the game ends. If you win, you proceed up to the next, more difficult competitor. There are also two intermissions. The first of these is from the first movie, in which the player has to catch a fly with, of course, chopsticks. This one is basically luck. The second involves the scene from the sequel where Daniel has to break six sheets of ice with his bare hands. This move is easily accomplished once you read the instructions (something I neglected to do for a long time).

When fighting, there are 18 moves and attacks, ranging from a simple punch in the face to a dazzling back roundhouse kick. Somersaults and jumps will help you avoid your enemy or place you in a strategic position for a high-scoring kick. However, you will probably be playing your first ten games or so with the rulebook propped open to the diagram of the positions on the joystick each move is triggered by. They also reverse positions should you decide to face left instead of right.

Level five is the real challenge to this game. Not only must you defeat Chozen by pounding on him, you must learn what the rulebook calls "the secret of the drum." It is called this because the drum from the sequel will suddenly appear in the upper right corner of the screen after you weaken Chozen to zero. If you don't know what to do, Chozen will simply punch your lights out in five or six seconds, and the game will end. But, even if you can defeat Chozen, all that you receive is an extra 5,000 points and the game ends anyway. This seems a bit distressing to me, because despite my killing Chozen twice, I still can't figure out what I'm doing right, and I still get killed nine times out of ten. Sometimes life just isn't very fair.

Two-player games are played with one player controlling Daniel and the other player controlling whoever his enemy happens to be at the time. These games are played as best three-out-of-five matches, and score doesn't really matter.

Now, to the technical features. Graphics are no less than superb. The views given include a ruined garden and a sinister-looking castle, both of which are done with fantastic detail. In the first intermission, Pat Morita's eyes move about, following the fly. They cross if the fly lands on his nose (and it will), and he winks smugly at you if he catches it. Graphics execution during the fighting is quite smooth, and when combined with the background the whole thing seems eerily real. My hat goes off to Pete Lyon for his job with the "artwork." The sound is also well done. The opponents give off grunts and shouts when attacking, and the smack of body parts colliding is heard all too well when a hit is scored. It should also by noted here that the title tune (Glory of Love by Peter Cetera) can and should be played via the MIDI ports through a CZ-101 in solo mode.

Every game is not without its faults, but in this game these faults seem very trivial. Control occasionally gets slightly iffy, and the program sometimes likes to take the move you just did and repeat it three or four times. The documentation is only two pages long, considering that the rest of the booklet is in French and German. Also, the biggest surprise to me is that this program doesn't seem to save high scores, although the drive runs and the write-protect is off.

However, these flaws are very minor when compared to everything else about this program. This game would make a fine addition to anyone's ST game library. Now, if you'll excuse me, I have to run down to Erol's to pick up The Karate Kid Part II so I can figure out how to deal with that drum.

TIME TO RENEW?

Look at the first line of your mailing label. If you see 8703, that means your subscription (club membership) ENDS with month 3 in 1987, i.e. this issue. Club members, send renewals to your appropriate club treasurers. Subscribers, send renewals to CURRENT NOTES. If you see an end date of 8704 or 8705, you might want to renew now to be sure you don't miss any issues.

WINTER GAMES
A Gold Award for 1986

Review by John L. Crowll

Winter Games for the ST, from EPYX, is a game for all those who enjoy winter sports but hate the cold. While sitting in the comfort of a 75 degree home, a person can take on some of the most gruelling and physically demanding winter sports without any fear of frostbite. About the only thing a person is liable to get is sweaty palms as they try just one more time to complete a Tripie Axel Jump.

Winter Games, which comes on two disks, presents seven events to compete in -- Biathlon, Speed Skating, Figure Skating, Ski Jump, Free Skating, Bobsled, and Hot Dog Aerials (acrobatic jumping on skis). With the exception of the last event, all the others are found in the Olympic games held every four years. Before competing in the games, I recommend practicing first. Several of the events are very difficult to master and will require a lot of practice to obtain decent scores. These events are truly realistic in that sense. However, there is no reason to let your victims -- I mean friends -- in on that information.

The first thing we see when *Winter Games* starts is the opening ceremony of the Olympic Games (1988 at Calgary, Alberta, Canada) accompanied by the familiar strains of the Olympic song. The next screen presents six options to choose from: compete in all events, compete in some events, compete in one event, practice one event, see world records, and opening ceremonies. If one of the competition options is selected, a person is next prompted for a player name and then a country to represent. There are eighteen countries to choose between and up to eight people can play. After getting addicted to the action, however, most people probably won't want to wait long before their turn and will probably keep the players down to three or four. After all these preliminaries, it's on to the games.

Game execution can be done with either a joystick or keyboard. I prefer the joystick as it saves wear and tear on the keyboard and also appears to enable slightly better scores. Figure Skating and Free Skating are the most difficult in which to get good scores. Timing is a very important aspect of these two events (just like in real life). Jumping at the wrong time or setting up for a landing at the wrong time will unceremoniously dump the skater on her behind. The other four events are not easy, but take less practice to obtain good scores. My favorite event is the Biathlon, cross-country skiing combined with a little bit of marksmanship. As usual with EPYX software, the graphics are very nicely done and the audio provides that extra touch of realism.

For those of you who wish to be immortalized in a sports hall of fame, *Winter Games* saves the best scores to a World Records file. The only complaint (truly a minor one) I have about the game is that the rules do not provide a listing of the real world records for these events. All of us diehard competitors like to be challenged by trying to beat another persons score. For those out there who want something to shoot for, I provide my own high scores in these events. Some of them are pretty dismal, however, I never really was much good at skating while wearing a skirt. Oh well ...

Figure Skating	- 2.0
Free Skating	- 2.4
Speed Skating	- 28.9 secs
Hot Dog Aerials	- 9.2
Ski Jump	- 191.1
Biathlon	- 2 min. 19 secs
Bobsled	- 22.1 seconds.

One improvement I could recommend for the game concerns the fact that *Winter Games* is played using two disks. For those of us with only one disk drive it can get a little tedious swapping disks to switch between the various events. Since there are plenty of public domain RAM disks in existence, it would be very convenient to be able to load the boot disk into RAM. The second disk could be left in the hardware drive and enable play without any inconvenience. This would still permit a software protection scheme to exist as the hardware drive disk could be checked every time it had to be accessed. There are other products on the market which utilize this capability and it really increases the enjoyment of playing them.

Winter Games is an interesting and fun diversion from your standard arcade type shoot-em-up game. It is also just as addicting. Although hand and eye coordination are involved (speed plays only a small part), at least a person has a fighting chance and a good opportunity to keep their children from wiping their name off the High Score list. EPYX has another winner here and has a Gold Award for 1986 from the Software Publishing Association to prove it. This award is given to products that sell in excess of 100,000 copies. If that's not a recommendation to buy, I don't know what is. See you on the slopes.

APPLIED COMPUTERS, INC., PRESENTS . . .

Applied Computer Associates of Gaithersb
of a new branch store located in Char

GRAND OPENIN

Applied Comp

SATURDAY, M

11 AM –

All Software Titles An Additional **15% OFF***

Sony SS 3.5" Box 10 **$11.95***

FREE PARKING

FREE Cable w/ Printer Purchase

ACA II 631-5377

Sony DS 3.5" Box 10 **$16.95***

Convenient Hours Mon.-Sat. 11am-7pm

REGISTER

- GRAND PRIZE—520
- 1st PRIZE—Citizen 12
- 2nd PRIZE —$75.00 Gi
- 3rd PRIZE—(4) $10.00

(*Must be redeemed by 04/21/87

App Compu

14506B
Chantilly,
(Corner of R

STORE HOURS: 1

(703) 631-

DOOR PRIZE COUPON

Name _____

Address _____

City _____ St. _____ ZIP _____

Phone: Home ( ) _____ Work ( ) _____

Computer you now use (Check one only) ☐ 8-bit ☐ ST ☐ IBM ☐ Commodore

Fill out this this coupon and bring it with you. Drawing will be held at 4 pm. Need not be present to win. Valid at VA store only.

rg, MD proudly announces the opening
illy, VA—Applied Computers, Inc.—II

8 BIT & ST HARDWARE/SOFTWARE!!!

G CELEBRATION

uters, Inc.—II

MARCH 21st

- 7 PM

TO WIN

Mono System
0D Printer w/Cable
T CERTIFICATE*
Gift Certificates*
Good at Virginia Store Only.)

lied
ers, Inc.

Lee Rd.
/A 22021
28 & Rt. 50)

M-7PM MON.-SAT.

-5377

Bonus DS
5.25" Box 10
$7.95*

Bonus SS
5.25" Box 10
$4.95*

Come
Celebrate
With Us!!!

1040 ST
Color
$895.00

520 ST
Mono
$495.00

ACA II
631-5377

Prices on
8-Bit/ST
Lines

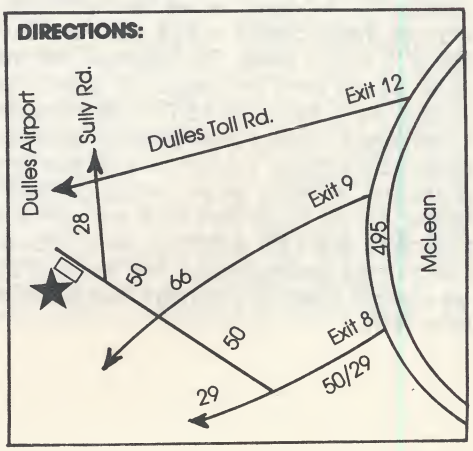
*Prices good Saturday 21, 1987 ONLY!

HOW TO GET THERE

LOCATION:
One block West of Route 28 & Route 50 in West Fairfax Commerce Center.

DIRECTIONS:
From Washington:
Take 495 to the Dulles Toll Road. Take toll road to last exit (#1). Make a left on Rt. 28. Follow 28 until reaching Rt. 50. Make a right on 50. Make your first left onto Lee Rd. & then right into industrial park.

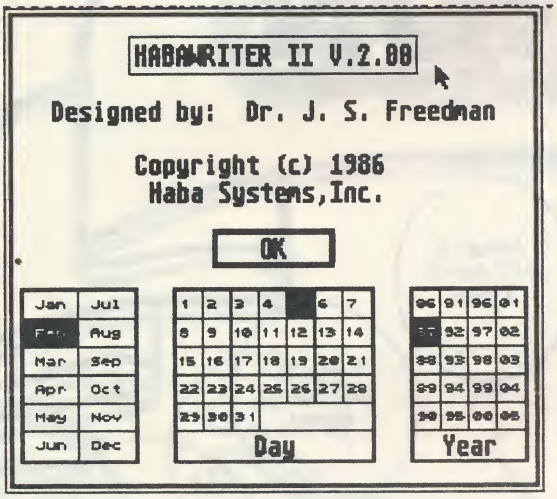
From all points south:
Take 495 to I-66. Take Rt. 50 west. After crossing Rt. 28, make first left onto Lee Road & then right into industrial park.



HABAWRITER II

Marching to the Beat of a Different Drummer

REVIEWED BY MILT CREIGHTON



HABAWRITER II from Haba Systems, Inc. is a new word processor for Atari ST computers. Included with the word processor is a nonintegrated spelling checker, HABASPELL, and the mail merge utility, HABAMERGE. The retail price of this program had not been established at press time.

Succinctly put, HABAWRITER II is a bargain if you can find it for under $100, but then bargains can have shortcomings. Many of you may remember the original HABAWRITER, one of the first commercially available productivity programs written especially for ST computers. It was a basic, bare bones word processor that, unfortunately for its developers, had to compete with 1ST WORD which was bundled with many of the early ST's and ST WRITER which was distributed through user's groups. I don't know how many copies of HABAWRITER were sold, but I suspect there weren't too many of us who were willing to shell out cold, hard cash for a word processor most perceived as being only marginally better (or even not as good) as programs which could be had free for the asking. That competition tended to obscure some of the advantages of the original HABAWRITER and, ultimately, make learning HABAWRITER II more difficult for many of us now.

1ST WORD set a trend in word processors for ST computers. As much as we decried its shortcomings, there were so many copies in use software developers could not afford to ignore them. For example, we began to EXPECT a GEM-based word processor to handle block operations a certain way. Because 1ST WORD was in common use, it established certain conventions that many other software developers have accepted and put to use in their own products. In many ways, those conventions make things easier for all of us because we can apply knowledge of programs like 1ST WORD to an evolutionary but similarly constructed advancement. The learning curve is shorter and we can get down to business that much faster. But not this time, folks.

HABAWRITER II is one case where someone inexperienced with GEM-based word processors could have an advantage over experienced users. Many of those conventions have to be unlearned first, you see. But once you get past that (and past an absolutely horrendous manual) you begin to get glimpses of the sheer word processing power just waiting to unleashed.

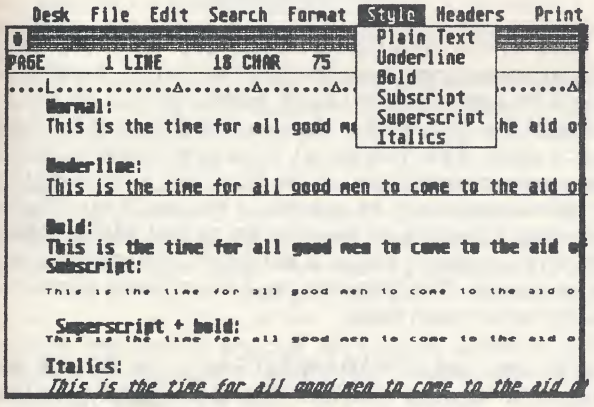
On the down side, HABAWRITER II can't integrate text and graphics and it has no double column capability. It won't tell you how much RAM you have remaining and you can't turn the word wrap off unless you are in ASCII mode. It will grudgingly accept ASCII text files not created with HABAWRITER II but it turned a cold stare on other word processor files I tried to load. It doesn't have an outline processor and you can't format disks from within the program.

The manual is a disaster. There's just no other word for it. There are four of them altogether. There's the original HABAWRITER manual (pretty skimpy), the mail merge manual, the spellchecker manual, and the addendum manual (the one with the real meat). None of them are well indexed although the original manual claims to have an index. I didn't find it very useful.

I know, I know...it's GEM-based so you won't really need a manual anyway. Sorry to disappoint you, folks, but you will. And you'd better start with the basic manual because HABAWRITER doesn't do things the same way 1ST WORD did. It might look the same but some of the familiar commands are noticeably missing and those that are present don't always do what you expect. HABAWRITER II, you see, has the framework of the original HABAWRITER, not 1ST WORD, but, on the positive side, the developer has built enough bells and whistles into the update to satisfy even an ACC basketball referee. But first, you have to learn how to get at them and that means wading through the manuals. I know the drill about that one, too. The manual was designed so you could learn it in stages, first the basics and then the goodies. The problem with that approach (even if it does save the company money) is that, once you've gotten into the program, you're stuck with a tutorial when what you really need is a reference book. This is a very fine word processor, one of the finest for the ST to date, but it's unnecessarily weighted down with a manual which detracts from the overall superb quality of the program.

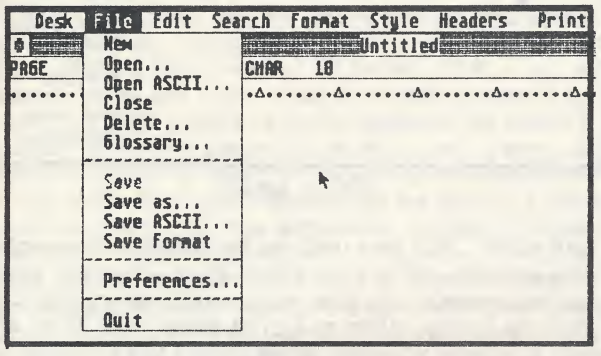
On the up side, the good features of HABAWRITER II are almost overwhelming. It has absolutely the best macro capability (bar none) of any word processor I have ever seen for a home computer. They aren't even called macros, as if the very act of calling them that would somehow limit them. Instead, they are called "Glossaries" and, after working with them even a little, you begin to sense the power of this program. You can define words, special characters from the international alphabet, or even formats as macros--just waiting for you to call up. Also included are such features as

automatic footnoting with lots of options, very complete automatic and manual pagination including page zoning (no more orphans or widows), the ability to customize your own keyboard if you wish (including accessing international character sets), an integrated print spooler (called background printing), and the best multiline header and footer capability of any ST word processor to date. The program will automatically enter the correct date in your letter, taking the information from your clock cartridge (if you have one). You can cut and paste between six different windows! You can put a printer stop mark anywhere in your text to stop the printer from printing while you change daisy wheels--and leave yourself a note to que which daisy wheel to use. It just boggles the mind!



HABAWRITER II TEXT STYLES

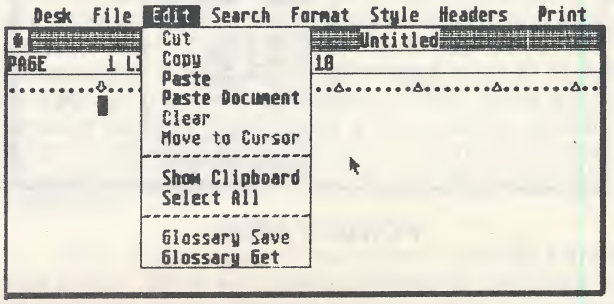
But before getting too carried away with all the bells and whistles, let's take a look at the framework. HABAWRITER II employs a conventional GEM-based window design. The menu bar at the top has fairly standard headers with most of the common disk operations under the "FILES" menu, block operations and macros under "EDIT", cursor movement commands and search and/or replace functions under "SEARCH", layout and on-screen formatting under the "FORMAT" menu, text styles under "STYLES", headers/footers and footnotes under "HEADERS", and, finally, the print options under "PRINT". The menu items are logically placed and easy to find once you stop expecting them to be 1ST WORD.



FILES MENU

In more detail, the FILES menu provides options for starting a new document, loading an already saved formatted file from disk, or of loading an ASCII file. The ASCII files I was able to load all had carriage returns at the end of each line. The manual tells you to load the file and then go to the PREFERENCES menu and select "ASCII MODE-NO" and the REFORMAT the document before doing anything else. Doing all of that didn't produce any changes in the document that I could tell. I wasn't able to remove the carriage returns and I wasn't able to take them out with the "search and replace" functions either. Taking them out by hand didn't work because it seemed to disable the word wrap feature. I was never able to satisfactorily solve this problem.

The other options on the FILES menu include closing windows, deleting files from disk, loading a macro (glossary) from disk, saving files to disk, renaming an edited file before saving, and saving a document format. In addition, the PREFERENCES submenu permits toggling between insert and typeover modes, hiding or displaying tab markers and carriage returns, displaying line counters or creating unformated ASCII files.



EDIT MENU

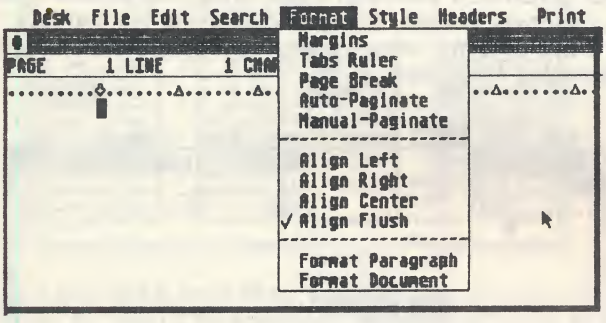
The EDIT menu contains most of the commands used in block operations. You can create a block by dragging the cursor (familiar to most of us) but there are no "start" and "end" block commands for defining large blocks which extend beyond the current screen. The two ways I found to create a block greater than the size of a single screen is to create a smaller block and then move the cursor to the spot where I want the larger block to end, hold down the <shift> key and click the left mouse button. The block will then expand to its new size. The other way is to use the "select all" option which effectively selects the entire document as a single block.

The block commands include "cut" which places the deleted text on the clipboard (hitting the delete key after defining the block does the same thing), "copy" which leaves the text intact but places a copy of it on the clipboard, "paste" which pastes a copy of whatever is on the clipboard to the spot of the cursor (instead of selecting paste from the menu you can just strike the <undo> key), "paste document" for appending whole documents from disk, "clear" which erases a block without placing it on the the clipboard, and "move to cursor" which moves text from one place in a document to another without putting it on the clipboard. It is also possible to see what you have currently placed on the clipboard by selecting "show clipboard". The glossary commands on this menu permit you to edit or create a glossary (macro) and then save it to disk. Normally, to use a glossary item, just type in the shorthand term and the strike the <F8> function key and the saved expansion will be inserted in the text.

The SEARCH menu doesn't contain any real surprises. All

of the search functions are familiar and most people won't have to refer to the manual very often on this one. Be careful about using the "replace all" function though, because it will find and replace all occurrences of the word, even if they are only fragments of another word and it does not respect case.

The miscellaneous commands collected under this menu include the ability to page through your document or place your cursor on any particular page of your choice. Other cursor commands allow placing the cursor at the beginning or end of a sentence or at the top or bottom of a screen. But movement of the cursor tends to be slow at times as does use of the <delete> key, particularly when eliminating spaces inserted for full justification. There's also a handy word counter which works from the position of the cursor to the end of the document.

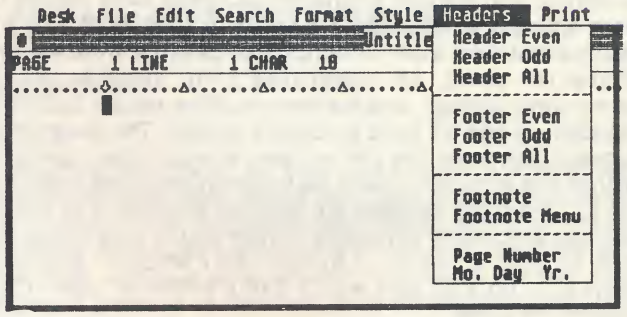


FORMAT MENU

The FORMAT menu contains the commands for setting margins and tabs, inserting hard page breaks, and both automatic and manual pagination. Pagination is controlled by setting the "page zone" to the desired number of lines. Then if the last paragraph on a page has less than the specified number of lines set in the "page zone" setting, the page will break at the end of the previous paragraph. The commands for left, right, center, and full justification are also found in this menu. HABAWRITER II has commands for formatting paragraphs individually or the whole document (from the position of the cursor on) at once.

The STYLE menu permits on-screen display of normal, bold, underline, italics, subscript, and superscript typestyles. These can be implemented as you type or in conjunction with block operations and one of the "format" commands.

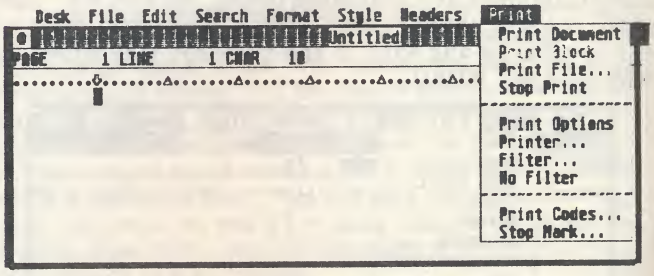
The HEADERS menu controls HABAWRITER II's header, footer, and footnote capability. The headers and footers, as earlier stated, are the most powerful I've seen for any ST word processor to date. Header and footers are entered in a separate text window and have available the same editing and formatting options as any other text page, so such items as margins, text styles, text position, and spacing can be different from the rest of the text. In addition, headers and footers can be entered in book form with different content, text style or positions, or even different margins on alternating pages. Page numbers can be automatically entered into either a header or a footer. Header and footer formats and substance can, of course, be saved in a glossary and then recalled for other documents. The current date can also be entered anywhere in the document simply by selecting that item on the menu.



HEADERS MENU

Also in the HEADERS menu are very impressive footnoting commands. Like headers and footers, footnotes are entered on a separate text page. Footnotes can be placed at the end of the document or they can be placed at the bottom of each page. The number of allowable footnote lines per page can be specified and, if the footnotes exceed that limit, they will automatically be printed on the next page. Footnote numbering is handled by the program so that adding, deleting, or moving a citation results in automatic renumbering where ever necessary. The footnotes can be numbered continuously or start over on each page.

Like the rest of HABAWRITER II, the PRINT menu contains some very impressive and powerful features. A document can be printed from edit, from disk, or even a specified block within a document can be printed without printing the rest. In addition, it is possible to print only selected, non-consecutive pages without printing the pages in between. The print option selection also permits setting the page number and engaging the print spooler. It is possible to send special print codes to your printer at any point in your text. Such codes are useful to set draft vs near letter quality, color printing, or to select different fonts such as (enlarged, elite, or condensed--along with a new margin setting, if desired). These codes can be saved to the glossary as well.



PRINT MENU

HABAWRITER II also requires the selection of a print filter (or the selection of no print filter). Print filters are used to access international character sets on dot matrix printers or to change the configuration of a print wheel on a daisy wheel printer. A number of printer drivers and a few print filters are provided, but to use the Epson print filter, for example, it might be necessary to redefine the keyboard to permit on-screen viewing of the international characters to be printed. Programs are available on the disk for redefining the

keyboard, and for creating new print drivers and print filters.

In operation, the program is slow at times, particularly when the shape of a paragraph has become messy from large-scale editing and you want to place the cursor with the mouse or delete text. In addition, I've noticed that extraneous words will sometimes appear at the very end of a paragraph for no apparent reason. The cursor will disappear when you use the arrow keys instead of the mouse to move it. (It's easy to wipe out your tab marks that way.) In addition, the help screen is minimal at best. It only shows the operation of the function keys with the <alternate>, <shift>, and <control> keys. These key combinations are mostly keyboard equivalents to selections on the drop-down menus but are incomplete, in my opinion. There are a lot of other operations (such as the letter transposition command) which are otherwise buried somewhere in the manual and deserve to be easier to find.

The mailmerge utility which is included with the program is fairly basic in design but appears complete since creation of the data file does not require the use of a separate data base program. The data file can be created with either HABAWRITER word processor or HABADEX PHONEBOOK. The spelling checker is one of the off-line variety. There is no way to check the spelling of a document while in edit and no interactive real-time mode. The spelling dictionary is SMALL, only 17,000 words, although you can add an almost unlimited number to it--the only certain restriction is disk space. In operation, the spelling checker will suggest alternate spellings by displaying a number of words which come before and after the suspect word in the dictionary. No artificial intelligence is used in the selection of the alternate spellings and, as far as I can see, THUNDER! from Batteries, Inc. has nothing to worry about. Still, it's free with the word processor and it's certainly worth more than that. It does display the words in context and you can check the spelling of certain pages in a document without checking the rest. The features are fairly standard, otherwise.

The Bottom Line: I remember when I first began looking at word processing a friend remarked that the quest a few of us undertake for the "perfect word processor" is somewhat like the quest King Arthur's knights undertook for the Holy Grail. You know in your heart it must exist, but somehow it always retreats, just out of your reach. In word processing, each new entry, no matter how good, only educates you about its own shortcomings and makes you yearn for the next. Needless to say, this quest doesn't end at Haba System's doorstep but HABAWRITER II is a worthy contender in its own right. It has many very powerful features not found in other programs and is definitely the best ST word processor to date for almost any technical application, whether a research paper for class or a textbook for publication. It is true that HABAWRITER II marches to the beat of a somewhat different drummer but the difficulties its lack of respect for convention initially imposes will disappear as you become familiar with the program. Less easy to forgive or forget are its poorly organized and presented manuals which not only make learning HABAWRITER II difficult but will be a continuing source of frustration into the future. Still, if you are willing to plow through the manuals and work with the program until you learn it, then HABAWRITER II should prove well worth the effort.

[Note: This review was prepared and printed using PUBLISHING PARTNER, the new desktop publishing program from Softlogik. The text was composed with STWRITER and HABAWRITER II, saved as ASCII files, and then stripped of carriage returns with the IMPORTER desk accessory included in version 1.01 of PUBLISHING PARTNER before being imported into column format. The graphics were created using SNAPSHOT which is a desk accessory that saves a screen dump to disk in DEGAS or NEOCHROME format. (SNAPSHOT is included in issue 3 of COMPUTE!'s Atari ST Disk and Magazine). The graphics images were imported into PUBLISHING PARTNER, cropped, resized, retouched, and then inserted into their place within the columns of text. The review was then printed with an NEC Pinwriter P6 24-pin dot matrix printer which in high resolution has a dot density of 360 x 360 dots per inch. The printer driver used was a beta test version of the NEC P6 drivers which Softlogik intends to upload to GEnie and COMPUSERVE once they are completed. Two different fonts were used (in a variety of point sizes and typestyles) in this review, helvetica and the system font. The system font was obtained by downloading it from GEnie. Softlogik intends to post a number of other screen and printer fonts on such bulletin boards along with a font editor which will permit owners to design and create an unlimited number of additional fonts for use in PUBLISHING PARTNER.

This most recent version of PUBLISHING PARTNER, while not different in major features from the earlier version, does not appear to crash as often. In fact, the program only crashed once during the preparation of this review which is a major improvement over the initial version. The developers are striving very hard to support their product and their efforts are to be commended. The other drawback, the extremely long time it takes PUBLISHING PARTNER to print out a page of text, has not been alleviated. The newer printer drivers (which do not work with earlier versions of the program) do skip white spaces but the high quality print comes at a price. Most printer drivers come in two versions, draft and final. Draft is somewhat faster than final but does not yield as high quality results. Depending on the printer used, you can expect each draft page to take 10 to 15 minutes and each page in final to take 20 to 45 minutes. The NEC P6 was at the high end of that scale. Laser printers will be quite a bit faster, of course. For dot matrix printers, this is not a program suited for high quantity output. The print quality, however, is the best I have seen for ST computers. And if the final NEC P6 printer drivers live up to the promise of the beta test versions, then the 24-pin NEC printers together with an Atari ST computer and PUBLISHING PARTNER make a viable low-cost desktop publishing system that can come close to rivaling low end laser printer systems and at a fraction of the cost. In short, Atari didn't need to announce plans to produce a desktop publishing system last month. For me, anyway, they already have one.]

ST UPDATE

The Smoke of Vaporware

by Joe Waters

Last month you read about the new PCs announced by Atari at the Winter Consumer Electronics Show — the "Mega ST" and an IBM PC clone. The unveiling of the IBM PC clone was particularly effective in boosting Atari's stock value. Then, within weeks, like a roller-coaster ride, reports surfaced -- and spread like wildfire -- that the new PCs were going to be DELAYED!, that there wasn't any new PC, that this was just VAPORWARE! Atari's stock values started dropping. (Atari stocked reached a high of 28 but, by February 22 had fallen back to 25 1/8 -- still considerably above their opening 11.50.)

•

The reports were printed in newspapers. The reports were written by reporters. The reporters were trying to make news. Reporters, particularly those covering the field of computer technology, often don't know what they are talking about. This case is no exception.

Have you been following Atari long enough to remember the introduction of the ST? There was an announcement. There was excitement. User groups were offered a chance to "order early." We did. We waited and waited and waited. Then, after what seemed like fifteen years, the first STs arrived. Some of them worked. We learned what the inside of the ST looked like. We learned how to "unsolder" the cover. We learned about "seating" chips. We eagerly played with LOGO (while waiting impatiently for BASIC) and discovered it was worthless. BASIC finally arrived and we learned it wasn't worth waiting for. But, nonetheless, the STs did start flowing, the trickle of software grew steadily stronger, and owners began appreciating the speed and power (and, of course, the price) of these new Ataris.

Now, almost two years later, the Mega ST is announced as is the Atari PC. When will we see them in the stores? When can you go out and buy one? Let's look at the calendar. The units shown in January were not production-line models. They were one of a kinds. With FCC clearance taken care of, the production line can start cranking out models. Slowly at first. Like the initial STs, the first 200 will be shipped via AIR to the states. These will appear, mostly in California, but elsewhere as well, perhaps as early as April or May. If nothing drastic is discovered with the early production runs, and as the factory gains experience, the production line can be speeded up, more units produced, and the bulk of the shipments start flowing. They most likely will be sent by ship, not by air. We have some subscribers who get *Current Notes* in Australia. It is shipped by surface. (Surface rates for CN are $1.21, air rates are $3.95. Notice that surface rates are quite a bit cheaper than air rates.) It can takes as long as three and a half months for *Current Notes* to arrive down under. I don't know how long it takes to ship computers, but I'm sure it is considerably longer than air mail.

When the computers arrive, they have to be unloaded, go through customs, and get to Atari warehouses. When enough accumulate to allow equitable shipment around the country, they then can be shipped to distributors who, in turn, will ship them on to individual stores. THEN, finally, you can go into you favorite retail outlet and buy one. And when will that be? Add up all the reasonable expectations for production and shipping schedules and the evidence points to just where Atari says it does: the May, June, July time frame. The Megas will make their appearance first (May/June). The Atari PCs will follow with about a one-month lag (June/July). The suggestion that these machines are vaporware is silly (or perhaps wishful thinking for some). Atari will produce these computers; they will ship their computers; stores will receive them and lots of folks will buy them.

While we are on the subject of schedules, look for the Atari 1200 baud modem in April. The blitter chip (standard in the Mega series) will be available in the April/May time frame. The blitter is done now. However, by including it with the new STs, production runs become high enough to reap economies of scale. This keeps the cost of the chip, both for the new machines and for those users who want to upgrade their old machines, as low as possible.

How about the Atari Laser Printer? Remember reports from CES that the laser printer would only be sold bundled with the Mega ST? To work effectively, the laser printer really needs one meg just to hold a full page of graphics. One reason the Apple Laser Writer is so expensive is because the printer itself has a 68000 CPU and one meg built into it. It is a computer in its' own right more powerful than the computers often hooked up to it. To achieve the same thing with the Atari, the computer must have a minimum of two meg (four meg is preferable), thus the requirement to link the Atari laser with the Mega STs. However, at CES a third party developer showed Jack a kit to upgrade a 520ST to 4 meg (or a 1040 to 2.5 meg). Thus, users will, indeed, be able to get the memory they need on the current ST models. As a result, Jack T. decided that the laser would be available separately after all.

By the way, early reports are that the output from this laser is quite good. Some observers think the smoothing algorithms used in GEM are better than those used in postscript. What this means is that the output from something like Publishing Partner on this laser might actually be better than the output users now get with the Apple/Laserwriter combination. What's more, by putting the required RAM in your computer, you now have the ability to emulate a wide variety of printer languages (e.g. postscript or PDL or anything else). Atari is trying to reach an agreement with a third party

supplier working on a postscript clone (like VIP is a 123 clone). Perhaps before this year is out, you will see the results of all this activity reflected in your CN pages.

The Atari PC was a major surprise to most observers. Everyone knew Atari was working on an IBM Emulator, but a separate machine? Development of an IBM clone has obviously been going on for some time. How did they keep it a secret? Those cables linking the development IBM stuff to an ST must have been put there just to fool visitors. Does this mean there will be no IBM emulator for the STs? No, it does not. It does mean, though, that when the emulator for the STs is released it will be considerably cheaper. Having developed a fully functional IBM clone in a stand-alone mode, Atari now has most of the ingredients it needs for the ST add-on. And, with similar parts being mass-produced, the cost of the ST-IBM emulator will be kept down around the $300 mark.

Not only can these new parts be used in the ST emulator, but also in other products as well. How about that chip set that provides graphics emulation on the IBM for all those various graphics modes. It's not going to take much to put those chips on a separate board and sell it to the IBM market. Within the year, watch for an Atari "graphics card" for the IBM market selling in the neighborhood of $60. As for schedules, remember that the IBM development at Atari, like the development of other new products, is done serially. Jack Tramiel does not employ an army of researchers; he has just a few. The development work on an ST-IBM emulator must await the completion of work on the Atari PC. After all, it's the same people (person?) doing all the work. We are not likely to see the IBM emulator for the ST before late summer or early fall.

Tried to buy a double-sided Atari disk drive lately? They are very hard, if not impossible, to come by. Early drives had been produced by Epson. Atari switched from Epson to Mitsui as the supplier for 3.5" drives. This is the same company that supplies Apple and Commodore. Could another company (IBM?) be getting into the act by buying up DS drives prior to announcing some of their new machines?

Reports have surfaced that the new drives can't write to tracks 81 and 82. These drives are all being made to a SONY standard for 3.5" drives that calls for 80 tracks. Current Atari drives now meet the market standards. The earlier Epson drives didn't quite. These Epsons could write to sectors 81 and 82, even though they weren't supposed to. Atari obviously is holding their DS drives for the 1040s and Mega STs. If you really need to convert your SS drive to a DS drive, you may have to look to those companies advertising upgrades for SS drives. Apparently, the mechanisms for the double-sided drive are available; it's only the completed units that are rare.

Yesterday I plugged in the Shanner SD-2000 disk drive. This is a box that is 3.25" high, 4" wide, and 9" deep with TWO double-sided, double-density 3.5" drives in it. I don't have enough experience with it to report on reliability, but it is whisper quiet. Too bad Shanner folded up their tent and went home. If the drive shortage persists, expect more enterprising firms to jump in to fill the void with "generic" drives for your ST.

Sometimes the most useful computer peripherals are small, unglamorous, but enormously functional. Let me tell you about three that I have and wouldn't be without. The first is a combination monitor stand, surge protector, and power extension. There are quite a few products like this on the market. I have a model made by Pico Products which cost me about $50. My monitor sits on top of the stand which can then be moved swiveled left or right or slanted up or down. In front of the console are six lighted switches. One is the master switch which turns power to the entire unit on or off. The other five switches control accessories (computer, monitor, printer, and two auxiliary units) which are plugged into the back of the system. I love the convenience of simply reaching up and flicking a switch to turn my printer or modem on or off. Invariably, power switches on these peripherals are placed in the most inconvenient place the designers could imagine. Now, I just leave the unit switch on all the time and use the master control switches in front of me to turn peripherals on or off.

CN readers will recall the frustration expressed in these pages by Atari's placement of the joystick ports on the 1040ST. (What was that about designers putting things in the MOST inconvenient places?) Well, L&Y Electronics has come up with a simple, but effective cure. They have a joystick extension for $30. This is simply two joystick connectors with a short ribbon cable to a small joystick box (.5" x 2.25" x 1") that fits (using velcro) on the right side of your ST keyboard. Plugging the mouse or joystick in these ports is simplicity itself. Since installing this extension, I haven't had to lift my 1040 once to plug or unplug the mouse or joystick.

The final item is a function key card holder produced by Static Engineering, Inc. (203) 879-4671, ($25) called "function aid." This is an easel made of clear polycarbonate plastic designed and molded to fit perfectly atop your ST with a 2" x 12" adjustable window which pivots to suit your lighting conditions. It sits directly behind your function keys and does not interfere with any part of the keyboard or the cooling slots. It comes with four stiff paper inserts that already have the function keys (F1 ... F10) printed in black on both sides. You just write or type the functions that your favorite software program supports. Even without anything written, clear black lettering above the function keys is a big help. The light lettering printed on the current function keys is another one of the design features built into the ST by an idiot. Function-aid is a high-quality product, guaranteed for five years.

Although the new Atari announcements are exciting and encouraging, be aware that the competition is not sitting still. In March, look for Apple and IBM (and Commodore?) to come out with announcements of major new products. We'll give you the details next month.

dBMAN by VERSASOFT
Industrial Strength Database Management

Review by John Barnes

THE FUNDAMENTALS

dBMAN, developed by Versasoft and marketed by Atari, is a good implementation of relational database management techniques for the Atari ST. This product is close enough to Ashton-Tate's *dBASE III* that a wary *dBASE III* user should feel comfortable with *dBMAN*. Files created by *dBMAN* can be converted to run under *dBASE III* and vice-versa. Programs written in *dBMAN*'s application language are not completely portable, but the differences are easily hammered out.

dBMAN is actually an interpreter for a programming language that can be used interactively (like BASIC in the immediate mode), in an interpretive mode (like RUNning a BASIC program), or in a pseudocompiled run-time mode (the run-time code generator and interpreter are sold as a separate product). The use of programmed procedures provides excellent documentation, and this is really the best way to use the product.

Whereas BASIC operates on individual words in the computer memory, the entities that *dBMAN* operates on are entire databases. It is this ability to operate on large assemblies of data that gives a database management program like *dBMAN* its power.

Versasoft's implementation gives developers the tools they need to create powerful applications for users of all kinds. A bookkeeper or administrative assistant could easily use *dBMAN* applications to serve a full range of needs for a modest sized business. The extensive literature on*dBASE III* is a rich source for applications that have already been developed, many of which are freely available in the public domain. At around $120, *dBMAN* is an excellent example of "power without the price".

dBMAN screens, like a sturdy pair of hiking shoes, are not beautiful. The examples in Figures 1 and 2 are rather clunky (but functional). Figure 1 shows the screen during an APPEND operation (adding a record to an existing database). Figure 2 is from one of my applications, a simple telephone directory. Version 3.01G of *dBMAN* uses GEM for some of its activities, which open up the possibilities for more elegant user interaction. Unfortunately, this means that the product is not comfortable on 520ST's. If I were a 520ST owner, I would spring for a memory upgrade before going for a second disk drive. Version 1.01 owners should keep a copy while sending in their $40 to upgrade to version 3.01. The upgrade provides an online editor for your command files that is worth the price of admission all by itself (what a joy it is to stop jumping back and forth between *dBMAN* and *1st_WORD* or *EMACS*).

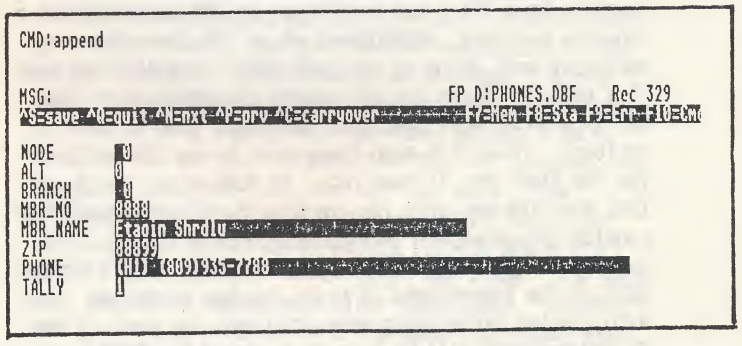


Figure 1

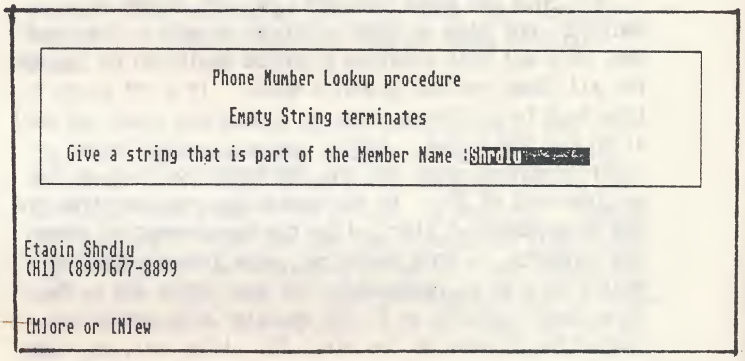


Figure 2

I usually put my database, the indices, and command (.CMD) files on Ramdisk when running *dBMAN*. It takes a while to bring *dBMAN* up off the floppy, but once you do so it is a delight to run (provided you do not have to access the floppy while running). The program is not protected, so it is easy to keep the things you need together. You can keep a fair sized database, *dBMAN*, a few required auxiliary files, and a few other small things (like a print spooler and a couple of desk accessories) on a single-sided floppy, but you have to give up the HELP and ERR files to do so. People who need to maintain large databases should find a sugar daddy to buy them a hard disk. When using a RAMdisk, do frequent backups to floppies for safety's sake.

THE PRICE OF POWER

People who are afraid to program will find *dBMAN* intimidating. The language is very rich and flexible, requiring close study, attention to detail, and frequent recourse to the manual. In the bare bones mode it can be tedious to use. If your database needs can be met by a simple file manager, try that first. If your application is inherently relational, then be nice to your local *dBMAN* programmer.

The programmer who is not so fearful can make good use of the excellent online HELP and ASSIST functions. The documentation would rate an "excellent" if it were not for the lousy index. There is no talking down, the reference material is well organized, and there is a lot of it. The examples are clear, although some items warrant a better description. When, for example, must one REINDEX?

GENERAL

I have experienced no particular hangups in developing my own applications and in importing data from other programs. The bugs reportedly fixed in the update document appear to have been relatively minor in nature. This is in marked contrast to some other supposedly professional quality software that I have used. I have experienced a lockup only once and I could not repeat it.

The package contains two single-sided disks and a 200 page loose-leaf manual in a sturdy slipcase. One disk has the programs and auxiliary files, the other contains a couple of examples and a tutorial. There are no glossy illustrations and parts of the manual may give some people eyestrain.

As a file manager *dBMAN* is very good. It is easy to add or delete fields in a database, to rename the fields, and to perform computations in which a field takes on values dependent on the contents of other fields. Adding or modifying individual records is relatively easy (and quick). Accidentally deleted records can be restored, within reason. Simple reports can be created using the online report generation module. More sophisticated reports require using the application language. The sorting and indexing processes are very flexible.

Error trapping, for the user who has the space for the ERR.HLP file on his disc, is quite good. It is, however, too easy to modify a database record with a bad tap of the <esc> or <undo> keys.

FOR THE ADVANCED USER

A finished application includes menus for selecting functions, screens for updating and querying the database, procedures for validating the data and protecting the files, and procedures for producing reports. The *dBMAN* application language provides tools for doing all of these things in a straightforward way. The example databases that are supplied, together with .CMD files to run them, can be dissected to provide the beginning *dBMAN* programmer with clues for building his own applications.

dBMAN supports an open architecture in several ways. The facilities for converting files from other programs into *dBMAN* databases are excellent. DIF (Data Interchange Format) files (from, for example, SYNFILE and VISICALC) and ASCII text files can be read into a *dBMAN* database with a minimum of sweat. Output files for mail merging (into STWRITER files, for example) are not hard to create. The use of macros and command files makes the language extensible, providing more flexibility for the user. The use of plain ASCII files for the command procedures can be a saving grace if you need to use an external program editor to build complex applications or to import canned applications from elsewhere.

Library functions are provided to take advantage of mouse control, pull-down menus, and some of the other features of GEM.

The *dBMAN* programmer will want to get away from the EDIT and APPEND functions in order to display more usable screens for data entry, to protect the integrity of existing data, and to eliminate distractions for the clerical workers who fill in the forms. An extensive variety of screen management tools is available for this, even if the results are not as pretty as with some other products.

This product could stand improvement in a couple of areas. Only very limited use is made of the function keys. CTRL-N, CTRL-C, ESC, and some of the other keys used in the EDIT, APPEND, and various MODIFY operations could easily be replaced by one finger operations using F1, F2, etc. HOME could be made equivalent to GOTO TOP. It would be nice to have a keyboard redefinition facility allowing the user to define macros for keys like ALT-E (which could be made to stand for EDIT, for example). It would be nice to have an UNDO function and some block operations (like cut and paste) in the MODIFY COMMAND procedure.

HOW RELATIONAL IS IT?

Earlier in this review I alluded to "Relational" databases, and I make a distinction between products that support this data model and "File Managers", which are used to maintain databases consisting of a single file with predefined data fields. To the extent that relational database management has the power to deal with more complex data structures it is bound to be more intricate than simple file management. Readers who want to learn more of the technical side of this subject should consult the bibliography at the end of this review.

One does not have to go very far down the road of database management before running into the limitations of the file manager approach. This occurs when it becomes most sensible to think of the data in terms of multiple "Tables" in contrast to the single table supported by a file manager. The yacht race scoring application in the December *Current Notes* was developed with this in mind, even though it had previously been done as a single table. The gamut of examples includes systems for invoicing, inventory control, disk

archiving, athletic scoring, project control, personnel management, payroll, classroom management, computer assisted manufacturing, statistical evaluation, bibliography maintenance, etc. The use of the term "Table" points explicitly to the relational data model. The student of the subject will be aware that there are other models, including the "Network" and the "Hierarchical" for data structures, but these have not, to my knowledge, had a serious impact in the ST world.

Since *dBMAN* purports to be a "Relational" database manager, we can ask how well it realizes this ambition. I have used definitions like those in references 1 and 2 in the bibliography in making my judgements for this review. Real experts could easily quarrel with my interpretations. Perhaps we can whip up some good examples for future library disks. The rate at which relational database products are being developed for all kinds of computers from micros to maxis testifies to the importance of the issue.

First off, *dBMAN* really does not support SCHEMA definition or a data dictionary as such. The attribute definitions in individual *dBMAN* tables (defined in the CREATE operation) are independent of those in all other tables. I view this as a shortcoming in *dBMAN*, but I am not sure how to redress it. The user who wishes to manipulate existing tables to create new ones can live with the problem by keeping careful track of attribute (or field) names, field types, and field lengths.

The *dBMAN* JOIN {FP & FS} TO <FC> ... implements the JOIN operation of the relational algebra, while COPY {FP} TO <FC> ... is an adequate implementation of the SELECT operation. APPEND {to FP} FROM <FC> ... is a satisfactory implementation of the UNION operation. The SET RELATION <Flp> TO <Flc> ..... allows the implementation of something akin to VIEWS, although a full-blown implementation would be nicer. The "{}" in the preceding denotes implied components of the syntax of a program statement while "..." denotes additional or optional syntax that can modify the scope or character of the operation. The <> pairs enclose required database names or aliases.

Automatic integrity checks are limited to verifying that data lies within the appropriate domain (of integer numbers or valid dates, for example). If tighter integrity checking in the form of "rules" is required the user must implement the database updating functions from a programmed procedure and there is ample provision for doing so. Access integrity control through some implementation of passwords might be desirable in some commercial applications.

dBMAN does not provide any controls over the existence of duplicate rows, and this is a defect. A DELETE DUPLICATES verb would be very useful.

One has to resort to programmed procedures more often than is desirable because verbs to do the job in a simple sentence don't work the way they should or are unavailable. If the UPDATE verb works the way I think it does, I don't like it. The JOIN operation seems unduly slow, perhaps better use could be made of indexing. The syntax of JOIN is also a bit strange because the names of the two entities to be joined are implicit rather than explicit.

The bottom line answer to the question of support for the relational model of database management is that *dBMAN* implements it tolerably well, if not in strict accordance with some standards. The work required to develop full scale applications is, however, considerable.

In future issues we expect to review other file managers and relational products, but right now *dBMAN* is the bench mark the others will have to reach. Given that *dBMAN* is a mature product, well positioned to take advantage of the extensive literature available for *dBASE III*, it is currently the relational database tool of choice for ST users, not glamorous, but a good cook and housekeeper.

THE ST ART GALLERY

by David Mumper

Hopefully, this is the beginning of a new monthly column here in *Current Notes*. It will be aimed at Graphics on the ST, and as such will cover almost anything graphically oriented. If you have any questions, or comments on any of the ST drawing or displaying programs, or have some neat pictures to share, feel free to drop me a line.

Our editor has asked me to draw upon my library of 1,600+ ST pictures to create a new series of artwork for the CN Library and I am more than happy to do so. To start out this month, I am introducing two new picture disks "TINYPICS NO. 1 & 2" (CN #108 and #109). On them, you'll find some digitized pictures taken from Ghostbusters, Raiders of the Lost Arc, The Empire Strikes Back, and The Shuttle. The pictures originated on an Amiga, and were digitized by Keith Fellenstein (Amiga owner), Mark Almon, and Mark Pennel using Digiview and a Laser Disc version of each of the movies. They used a Laser Disc player to get a very clear freeze frame, and the Digiview Digitizer is definitely one of the best around. These pictures were then transferred to the ST and converted using Pic-Switch, then Tinystuff, to get the fantastic pictures we have here.

In addition to the pictures, you'll find an updated version of both Tinyview and Tinystuff on these disks. The changes are detailed below.

Modifications to Tinyview include:

1. Faster loading time.

2. Recognizes all '.TN' extenders. TNY is from the older version of Tinystuff. TN1 through TN4 are from the newer version. You can use any extender you like as long as the first 2 letters are 'TN'. The older pictures are 100% compatible, and may have the extenders changed to represent their resolution.

3. While a picture is paused, you may press the ESC key to have the file name displayed in the upper left-hand corner of the screen.

4. Pressing the function keys while the program is running will change the amount of time a picture will stay on the screen. F1 is the default time (as long as it takes to load the next picture, and complete the rotation) and F2-F10 will set the timing to 1-9 seconds. The timing feature over-rides the timing saved with rotation information and is unaffected by other keypresses.

5. Tinyview may be installed as a GEM application (using the desktop OPTIONS menu) for TN? files. This will allow you to double click on a specific picture name at which to begin the display.

6. Monochrome pictures are displayed in medium resolution on a color monitor.

7. Exits cleanly, causing less trouble with running other programs after using Tinyview.

8. Runs on all RAMdisks I have available to test it on. (This was a problem with the RAMdisks, not Tinyview.)

Modifications in Tiny Stuff include:

1. Handles Degas Elite rotation information. It saves only the first set of rotation information.

2. Uses Dialog boxes instead of Alert boxes, leading to a much nicer and more colorful user interface.

3. Error handling has been improved.

4. Creates extenders TN1-TN5 standing for Low resolution, Medium Resolution, Monochrome Resolution, rotating Low Resolution, and rotating Medium Resolution.

5. Converts Monochrome pictures on a color monitor. (The old version needed a monochrome monitor to convert monochrome pictures.)

6. Exits cleanly, causing less trouble with running other programs after using Tiny Stuff.

7. Runs on all RAMdisks I have available to test it on. (This was a problem with the RAMdisks, not Tiny Stuff.)

Needless to say, I am always looking for more pictures. If you are a collector or have done some original artwork, don't hesitate to send in some pictures. Any disks I receive, will be returned to you with new pictures, and a list of what I have. Please enclose a list of what you have, as well as the type of drive, single or double, you have. The type of picture you are interested in would also help. The best of what I receive will, ultimately, be placed here in the *Current Notes* Library, so if possible, include an explanation of any novel ways you may have used in producing these pics.

For those ardent graphics addicts in the audience, I should also mention that I have an even more advanced version of the TINY programs with additional functions not found on the CN disks. If you have graphics-related questions, or would like to share some disks, or obtain the advanced Tiny programs ($6 please), write to me: David Mumper, N68 W25626 HIGHWAY VV, SUSSEX, WISCONSIN 53089.

DAC-EASY ACCOUNTING

An Inexpensive Package from the IBM World

Review by Pamela Rice Frank

Dac-Easy Accounting is the program that won rave reviews from a host of computer magazines in its initial IBM version. info World called it 1985's "BEST SOFTWARE VALUE." PC, PC World, and the Journal of Financial Computing all sang praises to the program. What was (and is) most remarkable about *Dac-Easy* wasn't so much its performance as its price. *Dac-Easy* offers General Ledger, Accounts Receivable, Accounts Payable, Purchase Order, Billing, Inventory, and Forecast all for a total of only $69.95. (I've seen the price as low as $49.95 by mail order — Computability.)

FEATURES: All *Dac-Easy* modules are completely menu-driven. Entering and posting transactions are two separate processes; however, unlike many accounting programs which require transactions to be posted on a monthly basis only, *Dac-Easy* lets them be posted at any time. Also, in this regard, the program lacks the forced audit trail of requiring a print out of a transaction before posting, but the General Ledger does prevent the posting of an unbalanced entry.

Dac-Easy also allows entry errors to be corrected or canceled in progress. This is one time to definitely follow the manual's instructions carefully though, because failing to strictly adhere to the prescribed procedure can crash the program, forcing you to reboot.

Dac-Easy also simplifies the transition between accounting periods, allowing 13-month accounting. In other words, you can keep the prior period open while you post to the current one. (You must, however, be certain to remember to calculate your 'automatic budget' in the forecast system before you run the end-year process to be able to use all data for calculation purposes. (You also must be sure to use the appropriate date, entered when you boot the program, when logging on to make certain your data is placed in the appropriate month.)

BILLING and ACCOUNTS RECEIVABLE: From the billing menu you can prepare your invoices, enter sales returns, print invoices, sales returns, or the sales journal, and post all the transactions to the General Ledger, Accounts Receivable, and Inventory system. Customer data can include, in addition to the company name and address, your contact person's name, the sales total, the credit limit, and year-to-date and prior year sales. The program will also calculate your specified monthly finance charge on any unpaid balances. You can also print customer directories and mailing lists. Add the customer phone number to the address information and you can print your rolodex cards. Service businesses, however, will probably find that *Dac-Easy*'s invoices are unsuitable because the inventory, ordered, and shipped headings can't be removed.

PURCHASE ORDERS: This routine allows you to prepare purchase orders to send to your vendors, enter the merchandise you've received, print all the documents necessary for auditing and review, and post this information to the inventory, Accounts Payable, and General Ledger.

INVENTORY: This routine will allow you to print your inventory listing, including a product number, description, quantity on hand, unit of measure, unit cost, sales price, location, primary vendor, inventory turnover, gross returns, and year-to-date (but not monthly) sales in units and dollars, using a multiple units on hand assessment based on one of three choices of per-unit costs -- most recent purchase price, standard cost, or average cost. LIFO assumptions are not supported.

ACCOUNTS PAYABLE: Invoice information is imported from your Purchase Orders. You can then print the necessary checks and records using *Dac-Easy*'s preset format. (Checks can not be customized. Dac sells checks.) Customized seven-column aging reports are another feature; however, invoices can't be selected for payment based on due date or discount date. Negative days overdue (days until the due date) is allowed though.

FORECASTING: Using your three-year history, automatic forecasts are available from the General Ledger, Accounts Receivable, Accounts Payable, and Inventory. You can forecast inventory needs based on past experience. While you can make statistical projections based on prior periods, this feature is somewhat limited due to the fact that inputting a percentage increase in one area -- 5% in expenses, for example — increases all other factors by the same percentage. Not exactly what I imagine you would be wanting to know when you're WHAT-IFing your way around your projections. The historical reports will prove valuable, but alas, this portion of the program, for the above-mentioned reason, doesn't eliminate the necessity of rekeying your data and using a spreadsheet to generate the accurate what-if information you'll probably want.

FINANCIAL STATEMENTS and REPORTS: You decide the contents of your financial statements, but beyond that your options are limited to a choice of only two layout options. If you're into printing fancy customized statements, you'll probably again find your needs better

served by a spreadsheet.

PASSWORDS: *Dac-Easy* allows for up to five levels of password protection. Level 1 allows access to the Billing and Purchase Order system only. Level 5 is the master password, allowing access of any menu and routine. Passwords can be up to eight characters each. The program does limit you to only one password per level, so if your company has two Level 1 data clerks or you have an equal partner also deserving equal Level 5 access, passwords must be shared. I suppose that's better than no provision for security, but it is a limitation.

CAVEATS: As I already mentioned, *Dac-Easy* was originally written for the IBM. This is obvious from the time you first crack open the 250+ page manual through the actual operation of the program. The manual doesn't even acknowledge that the user is in possession of the ST version. Booting instructions start with "Load *Dac-Easy* Accounting A)EASY." I can imagine mom and pop returning home and setting up their ST, their very first computer, for use in the business operations and looking around the desktop for that elusive "A)" and trying to figure out how to type in "EASY" beside the file cabinet icon.

Once 'EASY.PRG' is booted, the manual informs you to enter the date and time. The ST version asks for the date only.

Probably my major complaint, or question, is why did DAC choose pale, pale green as the color choice for data entered from the keyboard. Program menus, etc. are printed a generic black on a white screen. I use a color monitor, but I assume the pale green is replaced by a gray on the monochrome system. I found the pale green characters to be very difficult to read, adding to the frustration of learning my way around this program. The concept of differentiating between the prompts and your entered data is a good one, their choice of color is what I have a problem with. You may have to go to the control panel to customize the colors to something more to your tastes.

The aforementioned mom and pop are going to have an even greater problem if they, like I, have single density drives only. In all fairness to DAC, they are now -- in a disclaimer squirreled away in a far corner in their ads -- mentioning that the program requires a double-sided disk drive. I first became aware of *Dac-Easy* after seeing the 'Now available for the ST' notice at the bottom of the IBM ads. These ads ran in Atari publications, complete with mention of the *Dac-Easy* Tutorial program available for $19.95 which, as it turns out, at this point is still only available in the IBM version.

Unlike the IBM version which comes on one disk, *Dac-Easy* ST comes on one double-sided disk and one single-sided disk -- another possible source of confusion, since this isn't mentioned in the manual either. After discovering this problem, I did manage to transfer the programs from the double-sided disk to two singles, since the program is not copy-protected, with the help of a friend's drive. Now to begin....

Before entering any data, *Dac-Easy* requires that you set up your file size, establishing in advance how much disk space you'll need for the year's transactions. The manual gives hints based on your business' size, etc. along with a recommendation to add a liberal increase in that size to allow for additional space in advance should it be required. A form is provided at the back of the manual to aid in determining the amount of disk file space you'll need along with a formula for computing how much space that file will occupy on your disk. The ST version does not use as many bytes as specified in the manual.

Using *Dac-Easy* with two single-sided drives (Drive B can be configured to serve as your data disk.) creates additional problems when you choose a file from the main menu that is no longer on your program disk. The user MUST remember to swap disks prior to making the menu choice. Failing to do so either results in an "Error 64 @ Line 12850" message or, most often, a CRASH which requires a reset. To alleviate this problem, I tried copying the files to a RAM disk. Unfortunately, on a 520ST with a 1-meg. upgrade, TOS in ROM, and no desk accessories since they can't be accessed from within the *Dac-Easy* program anyhow, using a RAM disk large enough to hold all the *Dac-Easy* files didn't leave enough available memory to run the program. Only placing the files normally found on Disk 1 (the double-sided disk) in the RAM disk didn't work either because then the program only recognizes the RAM disk as 'Drive A' making it impossible to swap to Disk 2 when necessary. Personally, I'm of the opinion, because of the time it takes to load each module from the menu, that the only practical way to use *Dac-Easy* would be from a hard disk.

As directed in the manual, hitting [ESC] should take you back to the main menu but that doesn't always work on the ST. I had problems exiting the program from the menu also and was forced to use system reset on a couple occasions. (By the way, that menu exit option still even says, "99. EXIT TO DOS.")

Dac-Easy is a difficult program to master. There are no help functions or assists from within the program. The user must rely on the manual which, because it is an IBM version manual, adds to the difficulty. DAC does have DAC-EASY TIPS & WARNINGS sprinkled throughout the manual that, while they can be helpful, are also distracting since there are so many of them. Many pages have as many as five such hints. The manual does have an index, which helps, but I even found important omissions there. For example, look up 'password' and you'll find pages '47, 189' listed. Granted, a brief mention of that topic is made on those

pages. However, if you are looking for the explanation of menu choice 98.PASSWORDS, you need page 26.

Probably the most misleading thing in the manual is a sentence in the introduction, "It is also helpful (but not mandatory) to have a basic knowledge of general accounting." I can't imagine attempting to tackle *Dac-Easy* without it. The manual and program are difficult enough trying to follow without having to continually refer to some other source for explanations regarding accounting terms.

Another problem discovered was in the check writing portion of the program. *Dac-Easy* is supposed to print 5 X's (XXXXX) that are then to be lined up on the tear line of your preprinted checks. The 5 X's printed okay, but then the program immediately proceeds to print the checks with no pause to allow for the check alignment.

Dac-Easy is very unforgiving. As already mentioned, some keyboard mistakes will crash you out of the program. Accountants, by nature of their work, are normally precise. But, are the data clerks?

I suppose if you find tracking your transactions on paper is a bigger thrill than actually running the business itself, you'll have the patience necessary to master *Dac-Easy*, idiosyncrasies and all. As for me... I'm still shopping for an accounting program I can live with.

SURREAL–TIME CLOCK
Better Mouse Trap?

Review by Frank Sommers

What was I doing here? There in the middle of the table, with its shielding ripped off, and its estranged keyboard at the back edge with its connecting socket naked to the eye, was my one and only 520 ST . But I'm ahead of myself...

Those of you who are now dependant or wish to become dependant on having the time there whenever you turn on the machine, without the labor of having to type it in, hour, minute, day, month, and year, may be interested in Surreal System's clock chip. Those of you who are emulator conscious and want your cartridge slot free for the Magic Sac or whatever, will be even more intrigued.

The cartridge tucks inside your computer, under the first of the six ROM chips, with the latter piggybacking on top of it. Once there is runs for ten years on the lithium cell inside the chip. An accompanying software accessory gives you six time tools which range from handy to nearly indispensable. Uniquely, they are all packaged within an accessory folder, a first in my experience, so the six take up only one slot on the accessory menu, but snap up in full menu form with but a click or two.

Installation? The nine pages of documentation, precise and well written, tell you, "installation takes only minutes", and require no soldering. They also warn you at the beginning that if you don't possess the skill comparable to that of installing TOS chips in your computer, or otherwise don't feel comfortable installing the chip then have a technician or your Atari dealer do it for you. I had opened my machine several times, installed ROMS, and had to reinstall them, and at least on one occasion ended up back at the dealer to find out what I'd done wrong (we never knew; opening, checking and closing the case cured it). I note this fact, because when I had commenced the "surgery", taken out the screws on the bottom, lifted off the top, and resisted the temptation to pull the keyboard plug out by the wires, versus using needle nose pliers to lift it out, I looked at the shielding and started to sweat. I knew how easy it was to "fry" the chips by spraying a little static-electricity around. I got up and deliberately and slowly moved over to the wall socket and grounded myself by touching the socket plate. No sparks flew. Had they already dodged into the ST's chips?

That didn't relieve the tension, but it was a good stall before straightening the clips on the shielding and lifting it off to stare at the innards. There were the six ROM chips. All I had to do was remove the one marked "U2", put in the clock chip, mount the old one on top of it, and get out of there! None of them had "U2" stamped on top. I asked myself, half outloud, what I was doing fooling around inside this electrical mine field. After a further reading of the other data (C026160-01) that was supposed to be on the chip, I located the correct one. Out it came, in went Surreal's, back on top went the original, and I called for sutures and thread and sewed up the little beauty as fast as my screw drive could drive. A little more than an hour had expired.

Back at the desk, I plugged it all back together, hard drive, monitor, two drives, and the modem and printer. The tip of the mouse plug had come out of the end of it's plug, exposing nine wobbly pins that were determined they would not mesh back into the tip. Patient shaking, luck and ten minutes solved that one. Switch back on. The screen came alive, and I exhaled and smiled nervously. The mouse now worked. I hit the escape key to refresh the directory and mush. I mean silence. One third of my key board had gone to that big electron place in the sky! Now I knew I never should have violated the electronic sanctity of my staunch and formerly reliable ST. With that awareness came that sickening feeling and depression that accompanies the certitude that you are on the verge of making a trip to the electric hospital.

With nothing to lose, I yanked out the connections, cut open the machine again, and pulled out the keyboard connector, which seemed all too properly seated the first time. With little hope, I plugged it all together for one last try. Smile of smiles, it worked!

This little tale is recorded for you, to underline the words in the instruction's, "if you don't feel comfortable....". But if you do, it is just as simple, if not quite as fast, as the documentation claims.

The results? I had been using an external time clock, and missed it each time I had to pull it to make room for the Macintosh emulator. Now, for $49.95 (69.95 for the 1040 ST - Black Patch is sole distributor) I wouldn't be without the new clock. You can have either a small digital time slab placed up on the top right of your screen, or the full day, date and digital time positioned as you choose. And each time you boot up there it will be, just as you placed it. You have an alarm with notation, that will not only remind but tell you why it's reminding. You can check your available memory. You can turn the clock off, if your going away for vacation and want to make it last 11 years (when the machine is on, the lithium cell is disconnected). it includes a calendar, and for those of you who are frustrated by trying to figure the number of days between two dates, the answer is readily available. And all of this is available from a compact desktop accessory, is you so choose.

A better mousetrap? it would certainly seem so. SURREAL SYSTEMS, P.O. BOX 1492, ELLICOTT, CITY, MD 21043.

EXPANDING YOUR ST'S MEMORY
A Host of Possibilities

Review by H.B. Monroe

Not too long ago, computer buffs were amazed by the advent of new powerful computers with 64K of resident RAM. Just imagine, we thought, what could be done with 64,000 bytes of random access memory. Now, with each of the sixteen memory chips in the 520ST containing 256K, we look back and then ahead and wonder what will be next. Remember that the first PC, the Apple, appeared in 1977, just ten years ago....

Those of us who still want more power are fortunate, for there appears, from a small survey of the market place, to be three ways to upgrade or increase the memory of the 520ST. (1) buy a 1040ST; (2) install a RAM cartridge; or (3) increase the resident RAM. Each one of us will have to decide what is to be done to get the power.

The first idea, buy a 1040ST, although very attractive, does have some arguments against it:

1. You may not want all your eggs in one basket. Suppose the disk drive breaks down. Then the whole machine is out of order.
2. The 1040ST is expensive, especially after the purchase of a 520 ST.
3. You may prefer a smaller machine to carry around to user group meetings and to carry on visits to clients.
4. The list can be longer but why go on?

The second idea was to buy a RAM cartridge. One currently available is the Polydisk (about $200.00) with 512K of RAM which, with the included software, is added to the resident RAM and creates a lightning fast ram disk. The Polydisk provides the standard 520ST with a 1 MEG ram disk. Used with an upgraded 520ST, it can privide a 1.5 MEG ram disk. *First Word* takes about 15 seconds to load from a floppy disk and less than 3 seconds with a ram disk. The major drawback of this approach is that the ram disk loses all memory each time it is turned off.

The third way to enhance the memory of the 520ST is by far the most popular. May owners install an upgrade that enlarges the memory to approximately 1040K. There are dozens of venders offering a kit and/or installation service to bring about this end. There presently seems to be three types of this product offered:

1. The original piggyback upgrade. A 256K chip is soldered on top of each of the sixteen original chips and some resisters and other electronic devices are added to the computer. The installation of this upgrade is not recommended for any one other than expert electronic mechanics. It does, however, provide excellent service when properly installed. The 520ST used to write this article has a piggyback upgrade installed. Many venders still use this approach.
2. Recently, mother boards have begun to make an appearence. One class of mother board expanded memory upgrade requires three or more soldered wires and points. Be sure to have this type installed by experts unless you are an experienced technician.
3. Another class of mother board does not require any soldering at all. This type of upgrade requires the installer (you perhaps) to pry out two or three chips at different places on the computer board and to plug in the upgrade leads and then replace the chips on top of the mother board leads. This method seems to be the one which is fast gaining acceptance over the others.

The cost of upgrading the 520ST to 1 MEG of RAM varies from about $150.00 to $200.00. As the cost of 1 MEG memory chips gets lower, newer, simpler upgrade mother boards can be expected to appear on the market. The 1 MEG chips have already dropped in price from around $80.00 to $25.00 each. The 256K chip costs about $2.00 each. The 1 MEG chip is beginning to appear in products designed to enhance the memory of the 520ST beyond 1 MEG and in products to enhance the memory of the 1040ST.

Before you buy, check to acertain that the upgrade you are considering will be contigulous with present memory and that the upgrade will leave plenty of room for add on items such as the Blitter chip and an RF modulator. You should also be concerned about the possible need for a more powerful power source. The present 1 MEG upgrades for the 520ST all seem to work well with the standard power supply. Contrary to the talk you may hear, heat does not seem to be a factor in an upgraded 520ST.

Til Chamkis of AERCO says that machines with a 2.5 MEG upgrade work fine and so far none that he has seen have required a bigger power source. The AERCO 2.5 MEG upgrade utilizes sixteen 256K chips and sixteen 1 MEG chips and will presently cost $840.00. Chuck Meyer of ThoughSpace says that the 520ST can be enhanced to 1.5 Meg or 2 Meg. ThoughtSpace is currently working on a 4 MEG replacement board for the 1040ST.

Some of the venders and products considered in preparing this article are listed below:

AERCO, ACME Electric Robot Co., PO Box 18093, Austin, TX 78760. (512) 451-5874. 1, 2.5 and 4 Meg upgrades. List price: easieST 520ST RAM Upgrade 1- Megabyte,

$189.00. Install 16 Additional Sockets (2.5 upgrade), $20.00. Install easieST Ram Board (inc. S&H), $25.00.

Cal Com Inc, 6820-A Orangethorpe Ave., Buena Park, CA 90620. Meg-A-RAM Kit, $149.00. 16 wires to solder, a small, printed circuit board with ram chips installed. Template for doing the soldering.

Diverse Products, Inc., 1805 Northeast 164 Street, N. Miami Beach, Florida 33162. (305) 940-0458. Only 3 solder connections, Board (no RAM), $129.95; Board and RAM, $174.95

The Electronic Clinic, 4916 Del Ray Ave., Bethesda, MD 20814. 520 upgrade, 1 meg, $160; 2.5 meg, $650; 4 meg, $999.

Polyware ST, 5715 Horning Road, Kent, Ohio 44240. (216) 673-5591 after 5:00 PM. Polydisk, $199.95.

Terrific Corp., 17 St. Mary's Court, Brookline, MA 02146. (617) 232-2317. Simple soldedless installation. Features PUSH-Temp solderless installation. Incorporates gold-plated contacts and fully de-coupled memory banks. $199.00.

ThoughtSpace Development, 2450 Warring St. #21, Berkley, CA 94704. (415 845-1415. DoubleThink, 1 meg, $150; 2.5 meg, about $375.00.

AN UPDATE ON ST RAMDISKS

by Stephen D. Eitelman

INTRODUCTION. A RAM disk is a portion of the computer's Random Access Memory (RAM) that has been fenced off to function as a disk drive. Software is used to fool the operating system into thinking that portion of memory is actually a floppy disk drive. There are two primary advantages to such a scheme. First, a RAM disk is fast. There are no mechanical delays in positioning the head or waiting for the disk to be spun to the proper sector. Secondly, there is no mechanical wear of the drive mechanism or disk. This is important in applications that are especially disk intensive such as some word processors, some games and software development that requires many repetitions of the edit-compile-link-run-crash cycle.

The RAM disk is even faster than the Supra 20MB hard disk (on which this article is based), but not substantially so. The real advantage of the RAM disk when a hard disk is in use is to save mechanical wear on the hard disk. These things are delicate creatures and they always sound as if they are going to fly apart when the disk is being accessed. The RAM disk makes me feel much more comfortable with its total silence and I'm sure the drive will last much longer this way.

RAM DISK COMPATIBILITY. Hard disks such as the Supra 20MB drive permit the drive to be partitioned into as many as four separate drives, identified as C, D, E, and F. Even if only one drive (C) is selected, the controller still appears to allow for the remaining three to be selected at a later time. If a RAM disk is installed that utilizes drive identifier D, there will be a conflict between the RAM disk and the hard disk, regardless of the partitioning. The result will be either a warning that the drive does not exist when an attempt is made to access drive D, or loss of access to the hard disk, drive D.

RAM DISK REQUIREMENTS. What is needed, then, is a RAM disk that is compatible with the hard disk. It is also desireable that the RAM disk be immune from the reset switch and resolution changes. This way when a program bombs and locks out the keyboard, or a resolution change is made, the files will still be in the RAM disk after a reset and boot. Additionally, the amount of memory assigned to the RAM disk should be adjustable to allow for different size computer memories and to permit the ratio of working file memory to RAM disk memory to be varied as a function of the application. A RAM disk should also be compatible with an automatic loader, so that files currently being used can be loaded automatically at boot-up.

WHICH RAM DISK. Twenty six RAM disk programs were examined, two commercial and the rest public domain. The sources for the public domain RAM disks were the *Current Notes* ST library utility disks, GEnie and CompuServ. This selection of RAM disks is not exhaustive; every time I go into CompuServ or GEnie, there is another one! But these twenty six RAM disks seem to be representative. Only nine of them were compatible with the hard disk. Of these, three (ETERNAL, YARD, and RAMDSK1M) are also "reset proof" and immune to changes in resolution between medium and low on a color monitor. ETERNAL and YARD are also adjustable in size; RAMDSK1M (after modification by RAM1MFIX for use with the hard disk) is fixed in size at 500K bytes. The chart summarizes the RAM disks that were found to be compatible with the hard disk. Any RAM disk that was not found to be reset-proof was not tested further.

RAMDISK	SOURCE	HD COMPAT?	RESET PROOF?	SIZE ADJ?	AUTO LOAD?
RAMDSK1M.PRG	PD	Yes	Yes	No	Yes
FASTRAM.TTP	PD	Yes	No	XX	XX
SOLAPAK.PRG	Com.	Yes	No	XX	XX
ARAM.TOS	Com.	Yes	No	XX	XX
INTRAMDK.ACC	PD	Yes	No	XX	XX
RAM360	PD	Yes	No	XX	XX
RAM512	PD	Yes	No	XX	XX
ETERNAL	PD	Yes	Yes	Yes	Yes
YARD	PD	Yes	Yes	Yes	Yes

AUTO LOADERS. As alluded to earlier, when working with a set of files (such as a compiler) over a period of time, manually loading the files into the RAM disk each time the computer is turned on becomes rather tedious. As a result, a number of auto-loaders have appeared that load the files automatically when the computer is booted. I found a total of six and there are undoubtedly more. They are all public domain and are as follows:

NAME	SOURCE	COMMENT
RAMDLDR	CN #73	File names, source and destination can be independently specified.
AUTODISK	GEnie	Copies entire floppy to RAM disk
ULTCOPY	CN #63	Copies entire floppy to RAM disk
COPY	CIS	
FDCOPIER	GEnie	Copies folders to RAM disk
FLD2RDSK	GEnie	Copies folders to RAM disk

The name of the game here is flexibility: you want to be able to specify what the files are, where they are and where they are to go. RAMDLDR satisfies all these criteria and works well with both ETERNAL and RAMDSK1M.

OBTAINING RAMDISKS AND LOADERS. By the time you are reading this article, there will be a new utility disk in the the *Current Notes* ST Library [CN Library #107, Ed.) that contains what I hope is the "best" of the RAM disks. In addition, ETERNAL is available on GEnie; RAMDSK1M and RAM1MFIX are available from CompuServ. Both RAM disks are ARC'ed, that is, they have been ARChived. This is a process for reducing their length for storage purposes. After downloading them, they must be de-archived. A program named ARC.TTP and supporting documentation file ARC.DOC are available on CompuServ and from *Current Notes* Library #73, (ST Utility Disk No. 5). Just follow the directions in the DOC file to de-archive. It's not really as formidable a task as it first appears!

CN ADVERTISING RATES

No. of Insertions	Size of Advertisement			
	Quar	Third	Half	Full
5	$160	$192	$280	$500
4	136	163	238	425
3	108	130	189	338
2	76	91	133	238
1	40	48	70	125

Appoximate Ad Sizes:
Quarter Page: 3.5x4.5 or 7.0x2.25
Third Page..: 2.4x9.0 or 7.0x3.0
Half Page...: 3.5x9.0 or 7.0x4.5
Full Page...: 7.0x9.0

Photo-ready ad copy is due by the 15th day of the month preceeding publication. Send to CURRENT NOTES, 122 N. Johnson Rd., Sterling, VA 22170.

GOING ONLINE
Emulating the VT52 on Your ST

by Ed Seward

Those of you with STs that frequent some of the FoReM BBS' may have noticed the messages with colored text, inverse text and other uses of the VT52 escape codes. This does assume that one is using one of the terminal programs that supports a VT52 emulation. With *Flash* still being the terminal program that I recommend, I am going to combine a discussion on the use of the VT52 escape codes and their use with *Flash*. For quick reference see Table 1 for a list of the VT52 escape codes.

GETTING STARTED. To experiment without being connected to a BBS or other system, set your ST software to Atari or VT52 mode with half-duplex (Alt-P and Alt-M within *Flash*). Before I get started, let me mention a quick way to reset your terminal screen when using *Flash*. This will be handy if, while experimenting or after reading someone's message, you find yourself wondering how to restore the default terminal screen configuration. While viewing the terminal screen within *Flash*, hit [Alt-M] and select Vidtex mode. Then hit [Alt-M] and select Atari mode. This combination of steps will restore the terminal screen settings to the default or original conditions. In the text that follows, I am going to write strings such as "[Esc]b1[Esc]c3". This would call for one to press six keys in sequence: the [Esc] key; a lower case "b"; the number "1"; the [Esc] key; a lower case "c" and then the number "3". This combination will only work in medium resolution. If one is not using the Control Panel or other pallette setting program, then the above string would result in red text on a black background. Something else to keep in mind with FoReM messages is that the first character on a line cannot be the [Esc] character as it is treated as a blank space.

For the first sample, I will do a combination that displays a string of text then returns to the start of the text and repeats the string with a different combination of text and background color. I will use the following escape codes in various combinations:

"[Esc]b1"	set text color to red
"[Esc]b2"	set text color to green
"[Esc]b3"	set text color to black
"[Esc]c0"	set background to white
"[Esc]c1"	set background to red
"[Esc]c2"	set background to green
"[Esc]j"	save current cursor position
"[Esc]k"	restore cursor to saved position

The first pass of characters is:

```
"[Esc]j[Esc]c2   Atari Rules   [Esc]k"
```

This will display black text on a green background and then return the cursor to the second column of the line where this is being displayed. Now we will add the remainder of the passes to the above string.

```
"[Esc]j[Esc]c2   Atari Rules   [Esc]k"
"[Esc]c1   Atari Rules   [Esc]k"
"[Esc]b0   Atari Rules   [Esc]c0[Esc]b3"
```

All three lines above should actually be on one line but I have written them as shown for readability. This changes the background color to red as it rewrites the text portion of the string then again returns the cursor to the second column and then restores the background color to white as it again redisplays the text. (PLEASE -- as as courtesy to others make every effort to restore the original screen colors before finishing your message.)

LINE INSERTION & DELETION. The next sample introduces several more escape sequences that can be fun.

[Esc]E	Home cursor & clear screen
[Esc]f	Make cursor invisible
[ESC]e	Make cursor visible
[Esc]p	Enable inverse text
[Esc]q	Disable inverse text
[Esc]L	Insert line at cursor position
[Esc]M	Delete line at cursor position

The complete sample is:

```
" [Esc]f[Esc]E[Esc]p   Atari   [Esc]H"
" [Esc]L   Atari   [Esc]H"
" [Esc]L   Atari   [Esc]H"
" [Esc]L   Atari   [Esc]H"
" [Esc]L   Atari   [Esc]H[Esc]q"
" [Esc]M[Esc]M[Esc]M[Esc]M[Esc]e"
```

Now suppose one wants to do something similar but from within a *Flash* 'DO' file:

```
" [Esc]f[Esc]E[Esc]p   Atari   [Esc]H¦"
"]WA )¦"
" [Esc]L   Atari   [Esc]H¦"
"]WA )¦"
" [Esc]L   Atari   [Esc]H¦"
"]WA )¦"
" [Esc]L   Atari   [Esc]H¦"
"]WA )¦"
" [Esc]L   Atari   [Esc]H[Esc]q¦"
"]WA )¦"
" [Esc]M[Esc]M[Esc]M[Esc]M[Esc]e¦"
```

Notice that between each line of text that we actually want to send, we have added "]WA);|". This tells *Flash* to wait for ")" before sending the next line of text. This is the character following the line numbers of Email and messages within FoReM. Be sure to change this to the appropriate character for the various online services that you use.

When setting up escape sequences, I have developed a preference for putting them into 'DO' files rather than into the various function key definitions. I then place the call to the DO file as the function key definition. This is especially good for those sequences that are longer than 70 characters. For the shorter sequences, the function keys will do. To place the escape character within a function key, hit "Control-[" while editing the desired location of a function key. (Thanks go to Alan Page for pointing that out.)

TELECOM UPDATES. Antic is working on another telecommunications accessory for the ST. The ACC will accelerate xmodem file transfers by 40%. A VT-52 emulation is also supposed to be included within the ACC. (I haven't had a chance to find out if the transfer protocol used is wxmodem. If this is the case, then I look forward to it's being implemented in most ST BBS software.)

The last I heard about ST-Talk Professional was that it should be released "soon".

The activity within the Atari SIGs on GEnie has been growing by leaps and bounds in recent months.

COMING TO GOING ONLINE. In the near future I will be covering the creation of *Flash* 'DO' files in more detail as well as some ideas for using them. Other topics will include looks at BMODEM and Uniterm, two public domain terminal programs in the WAACE ST Disk Library.

Table 1
VT-52 Escape Codes

Function	Usage
Cursor up one line	Esc A
Cursor down one line	Esc B
Cursor one position to the right	Esc C
Cursor one position to the left	Esc D
Clear screen and home cursor	Esc E
Home cursor	Esc H
Reverse index	Esc I
Erase to end of page	Esc J
Erase to end of line	Esc K
Insert line at cursor position	Esc L
Delete line at cursor position	Esc M
Position cursor	Esc Y
Set foreground color to #(0-3)	Esc b#
Set background color to #(0-3)	Esc c#
Erase from top of page to cursor	Esc d
Make cursor visible	Esc e
Make cursor invisible	Esc f
Save cursor position	Esc j
Restore cursor to saved position	Esc k
Erase a line	Esc l
Erase from beginning of line to cursor	Esc o
Enable inverse mode	Esc p
Disable inverse mode	Esc q
Wrap at end of line	Esc v
Don't text at end of line	Esc w

The # in the ESC-b# and ESC-c# sequences can be replaced with the characters 0-3 in medium resolution. Without the use of a pallete setting program such as CONTROL.ACC then the color values default to: 0 (white), 1 (red), 2 (green), 3 (black).

MAKE IT MOVE

Review by Bill Moes

While sifting through the ST software, searching for something special, we've all had to put up with disappointments. The highly rated duds. The big name bombs. The dogs of ware.

Yet there is an occasional prize. A program that somehow captures a personal fancy. And it often comes from a *nowhere* place or a *who's-that* name. Yes. it's that time. Let there be a roll of drums. A pause. Think about that special graphic you've created. Too long standing still? Well, *standing still* time is over.

The description sounds almost dull: "Make it Move" (MIM) is designed to move graphics around on the monitor's screen. That's pretty much it. But the implementation is enjoyable to use. And the potential is yours.

MIM does not include any tools to actually create the graphics. Other programs which save in "NEOChrome" or "DEGAS" compatible files are necessary. After the plans have been formed and the graphics developed, the first of two programs from MIM is used.

The *Objects* program defines the individual graphics you plan to place or move. Simply click the large crosshair cursor on the top left and the bottom right of each graphics block and key in a name. Interested in something eye-catching and special? Create the zoom of a graphic. Flashy. A zoom is memory intensive, so it's best to keep the zooming objects somewhat small in size.

The time spent in the *Objects* program will be quite minimal. Once the objects have been defined and saved in either a standard (NEO/Degas) or a compressed format, it's time for the second program.

The *Script* program ties it all together and appropriate tools are clearly offered. Load the files you plan to use. Full screens may then be displayed by fades, a quick cut, or wipes across the screen in any of four major directions and at variable speeds. Individual graphic blocks may be zoomed on or off, shown, hidden, or moved point-to-point at variable speeds. You may also move one object in front of another, fade the screen to black or white, insert a delay timer, or have the script wait for a mouse click before continuing the display.

In preparing a script, the mouse is used throughout. The menu is shown on the lower section. Icons for the script are displayed on the top part of the screen. The icons show what is happening, at what speed, and for how long. With the opportunity to alter the speed of the objects a single pixel-per-step and delay times in 1/60 second, a clear amount of control is offered.

The script is linear, only one object in motion at a time. Other than repeating the entire script over, it's not possible to do programming loops. MIM operates in low-res only and offers no provision for sound.

This is not a top-gun animation program. You won't run into such esoterica as *in-betweening* or *tweening* or anything called *cel* or *metamorphic* animation. While it is possible to create the illusion of animation with MIM, it will require detailed effort. The smooth movement of objects about the screen, however, is easily and quickly accomplished. A click or two. That's all. Moving an object over other objects, though, does cause a perceptible change in the object's speed.

The uses for MIM include business and educational presentations, promotional displays, video titling, or personal enjoyment. Create your own electronic comic strip. Influence your customers, amaze your friends, entertain your family. We already have the graphics-producing software, text fonts, and clip art. Combine them with MIM and even the most untalented may develop sophisticated productions. Those with a creative touch have the tools to step up and dash a little dazzle.

The disk-based documentation (about 5000 words) clearly explains the program and offers ideas and techniques to improve your efforts. The $49.95 program from Avila Associates is not copy-protected.

MIM was written by Rene De La Briandais. In talking with De La Briandais, I was impressed with his enthusiasm and eagerness to listen and help. He hopes to include additional features in future revisions.

The just-released version 1.2 of MIM adds some helpful flexibility in the use of certain *Script* statements and corrects several minor bugs. It also includes a *Viewit* program to use in distributing your scripts. A 5-lesson set of scripts is part of the 2-disk package, demonstrating the capabilities of the software to new owners. So that non-owners will have the chance to take a free look, a copy of *Viewit* and demos from MIM should now be available on ST Bulletin Boards. The early (1.0) version of MIM did not include the *Viewit* program or the 5-lesson set in its single-disk package. Owners of v.1.0 may receive the v.1.2 update, with its increased *Script* flexibility and bug-fixes, for a nominal fee.

If its capabilities mesh with your interests, you'll enjoy MIM and its no-puzzlement approach to creating or editing a script. I could all too easily spend time detailing a special effect, and the ease of MIM's use encourages this effort. It was also possible to do a quickie show without a hitch. Like a movie, the software gives a stylish look even to those reel efforts backed with little of those real efforts.

So in that sifting way, I found that occasional prize. This one has power. This one is easy to use. And this one means we now can really *Make It Move*.

THE ELECTRONIC CLINIC

4916 DEL RAY AVE. BETHESDA, MD 20814
301-656-7983

MARCH 1987

ATARI ST COMPUTERS AND ACCESSORIES

1040 COLOR SYSTEM	899.95
1040 MONOCHROME SYSTEM	749.95
520 COLOR SYSTEM	749.95
520 MONOCHROME SYSTEM	499.95
SF314 720K DISK DRIVE	224.95
SF354 360K DISK DRIVE	149.95
SHD204 20 MEG HARD DISK DRIVE	599.95
SUPRA 20 MEG HARD DISK DRIVE	689.95
INTERNAL CLOCK/CALENDAR w/CAPS LED	49.95
ST COMPOSITE MONITOR CABLES	19.95
520ST MEMORY UPGRADES TO 1 MEG	170.00
UPGRADES TO 2.5 MEG	849.00
UPGRADES TO 4 MEG	1499.00
1040 EXTERNAL COMPOSITE GENERATORS	59.95
520ST MEMORY UPGRADE BOARD 0K RAM	150.00
USE WITH 256K or 1 MEG CHIPS	
ST/IBM PRINTER OR MODEM CABLE	17.50
ST MOUSE	60.00
520 POWER SUPPLY w/o TRADE	90.00
w/ TRADE	65.00
ST DRIVE SUPPLY w/o TRADE	75.00
w/ TRADE	60.00
ST 6' DISK DRIVE CABLES	19.95
ST 13 PIN MONITOR PLUGS	5.50
MOUSE MATS FOR ST MOUSE	9.95

ATARI 8-BIT COMPUTERS AND ACCESSORIES

65 XE COMPUTER	99.95
130 XE COMPUTER	139.95
1050 DISK DRIVE	149.95
1027 PRINTER	115.00
1802 COLOR MONITOR	249.95
XETEC GRAPHIC PRINTER INTERFACE	59.95
800/XL/XE/1050 POWER SUPPLIES	25.00
ATARI 6' DISK DRIVE CABLE	12.00
ATARI COMPOSITE MONITOR CABLE	10.00
850 PRINTER OR MODEM CABLE	17.50
5200 JOYSTICKS	30.00
2600 POWER SUPPLIES	12.00

CALL US ABOUT THE NEW ATARI PC-COMPATIBLE COMPUTER. WE ALREADY HAVE IN STOCK OVER 450 PC-SIG PUBLIC DOMAIN DISKS FOR THIS COMPUTER, AS WELL AS: CABLES, HARD DRIVES, INTERNAL MODEMS, MONITORS, JOYSTICKS, AND MANY OTHER PRODUCTS FOR PC's AND CLONES.

PC-SIG DISKS #1 - #454 4.00 ea

CALL US ABOUT QUANTITY PURCHASES FOR COLLEGES, OR GOVERNMENT CONTRACTS.

OTHER PRODUCTS AND ACCESSORIES

MONITOR SWIVEL STANDS		22.50
6 OUTLET SURGE PROTECTOR W/BREAKER		24.50
A/B SWITCH BOXES PARALLEL or SERIAL		49.95
3.5" DISKETTES CASES	HOLDS 26	12.99
	HOLDS 50	19.99
5.25" DISKETTE CASES	HOLDS 100	19.99
3.5" MEMOREX DISKETTES		
10	FOR	15.00
100	FOR	140.00
5.25" NASHUA DISKETTES		
10	FOR	7.50
100	FOR	65.00
5.25" "AT" DISKETTES w/CASE		
10	FOR	26.50
100	FOR	255.00
COMPUTER PAPER 9.5" x 11"		29.50
CONTINUOUS FEED, SMOOTH EDGE PERFORATED		
2500 SHEETS, BOND WHITE		

PANASONIC PRINTERS

KX-P1080i	120 C.P.S. DOT MATRIX	249.95
KX-P1092	180 C.P.S.	349.95
KX-P1592	180 C.P.S. Wide Carriage	499.95
KX-P1595	240 C.P.S. " " "	699.95
KX-P3131	LETTER QUALITY	299.95
KX-P3151	" " " "	499.95

ALL PANASONIC PRINTERS ARE EPSON COMPATIBLE AND HAVE A 2-YEAR WARRANTY

THE ELECTRONIC CLINIC IS A COMPLETELY BONDED, LICENSED, AND INSURED REPAIR SHOP THAT HAS BEEN SERVING THE WASHINGTON METROPOLITAN AREA SINCE 1969.

WE ARE AN ATARI FACTORY REPAIR CENTER. PROFESSIONAL SERVICE ON: ASTRA, INDUS, RANA, and TRAK DISK DRIVES. EPSON and PANASONIC PRINTERS, MOST BRANDS OF MONITORS, PC's, XT's, and AT's also.

*** ALL SOFTWARE AT LEAST 20-25 % OFF ***

WE STOCK THE ENTIRE CURRENT NOTES ST PUBLIC DOMAIN LIBRARY. $4.00 PER DISK

ALL PRICES LISTED ARE GOOD FOR THIS MONTH ONLY WITH THIS AD. NO PHOTOCOPIES
SOME ITEMS MAY BE IN LIMITED QUANTITIES
PRICES ARE SUBJECT TO CHANGE
CALL TO INQUIRE ABOUT ANY PRODUCT LISTED

RECENT ST RELEASES

by Andy Nicola

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

Concept Development, based in Bethesda, MD, has released *Mr. Bostons* Micro Bartender's Guide. A potpourri of 1,001 meticulously measured mixed drink recipes. The company also released five different cookbooks with 200 recipes on each disk. The titles are *America Cooks American*, *America Cooks Chinese*, *America Cooks French*, *America Cooks Italian*, and *America Cooks Mexican*. Bon apetit!

Astrology Horoscope Maker from Navarone simply has many more features than anything previously done in its class. This is the program that the serious buff has been waiting for.

InaGEM Agenda+ is a truly integrated desktop organizer which utilizes intuitive icons and our special ST graphics. Functions include: database, memos, journal, diary, calendar and more, from InaGEM Technologies, Montreal, Quebec.

This month's offerings in education come from World of Windows and The Buzzword Gaming Co. World's two releases are *Robot Construction* and *Robot Addition*. Both are geared towards elementary level skills and development. *Buzzword* is a delightfully unique database-type trivia exploration of 200 subjects covering all common academic areas. Players use luck, strategy and clues to help answer the questions.

Dave Beckemeyer, of Beckemeyer Development, has come through again with two winners for those who work instead of play. *VSH Manager* is rather unique in the operating system utility category. The program allows two separate programs to be accessed from within his *MT C-Shell* environment. The best part is that one of then may be a GEM application. The *Hard Disk Toolkit* will surely include Backup/Restore, Sector Analyzer and maybe another version of the *Accelerator*. I do not know if it includes an optimizer. I will call him on this.

Those colourful people who gave us *ST Pool* are now sliding *ST Shuffleboard* at us, a very serious simulation of the longboard game, from Shelbourne Software.

Sonus Corporation unveiled *SuperScore*. This music specialty program allows library maintenance, full on-screen editing and true scoring of MIDI music files with the additional feature of full printouts.

Z-Base is an index card-type database from Terrific Peripherals, those same people who gave us the Z-time clock-on-a-chip.

DoublePak arcade action, again, by Paradox, *War-Zone* and *Fire-Blaster*. Two shoot-em-ups on the same disk.

See your local dealer for more information on any of these products. Next month I will turn you on to some heavyweight business and telecommunications programs.

ATARI HOTLIST

Need some help with your Atari? Our "Hotlist" volunteers may be able to lend a hand. Please limit calls to 6-10 pm EST.

DRIVES		
PERCOM	Greg Black.....	703-938-0748
	Gary Purinton....	703-476-8391
	Cliff Trump.....	703-323-7184
1050	Ron Peters.....	703-780-0963
INDUS	Greg Black.....	703-938-0748
ASTRA	David Lankford...	703-938-6743
TRAK	Roger Morlhand...	703-630-9151
PRINTERS		
ATARI 1027	Bruce Cameron....	703-998-6525
ATARI 1020	Lee Givens.....	301-871-5417
ATARI 825	Frank Budelman...	703-750-0079
CITIZEN 120D	David Meyers.....	703-455-7145
EPSON	Dick Knisely.....	703-476-0529
MANNASMAN-TALLY	Duke Wheeler.....	703-281-6653
	Gary Purinton....	703-476-8391
	Cliff Trump.....	703-323-7185
OKIDATA 92	Roland Gabeler...	703-620-9142
PANASONIC	Dennis McCormick.	703-430-9552
	Terry White.....	703-560-7726
	Jim Parks.....	703-533-1754
PROWRITER	Greg Black.....	703-938-0748
	Ron Peters.....	703-780-0963
	Rick Frick.....	703-573-1382
SMITH CORONA	Rich Frichter Jr.	703-378-7023
TPI	David Lankford...	703-938-6743
GEMINI 10X	Jim Stevenson....	703-378-4093
	Dick Caldwell....	703-356-4248
ST 520		
	Alice Barney.....	703-978-9376
	Ken Whitesell....	301-636-4756
	Barry Burke.....	703-830-1978
LANGUAGES		
ASSEMBLY(6502)	Charles Pearson..	703-437-1199
ASSEMBLY(68000)	Ken Whiesell.....	301-636-1978
ACTION	Rich Fichter Jr..	703-378-7023
	Jim Stevenson....	703-378-4093
ATARI BASIC	Don Tucker.....	301-229-5379
ST BASIC/LOGO	Alice Barney.....	703-938-9376
GFA BASIC	Terry White.....	703-560-7726
OSS BASIC XE	Mathew Spolin....	301-656-5673
C	Ken Whitesell....	301-636-1978
FORTH	Clarence Connelly	703-437-6353
	Roger Morlhand...	703-430-9151
LOGO	G. Weatherhead...	703-938-4829
PASCAL	Allen Clarke.....	703-250-4469
	Al Friedman.....	703-425-0575
PASCAL OSS	Ed Seward.....	703-573-5022
TELECOMMUNICATIONS		
1030	Allen Eckert....	703-573-3543
PROMODEM	Joe DiBenedltto.	703-323-0120
MPP	David Lankford..	703-938-6743
	Dick Caldwell...	703-356-4248
	Jim Parks.....	703-533-1754
HAYES SMART	Rich Fichter Jr.	703-378-7023
	Gary Purinton...	703-476-8391
HAYES 2400	Mathew Spolin...	301-656-5673
HOMETERM	Scott Trump.....	703-323-7184
	David Lankford..	703-938-6743
EXPRESS!850	Gary Purinton...	703-476-8391
FLASH	Ed Seward.....	703-573-5022
WORD PROCESSORS		
ATARI WRITER	David Lankford..	703-938-6743
	Jim Stevenson...	703-378-4093
ATARI WRITER+	Ron Peters.....	703-780-0963
BANKSTREET WRITER	Adair McConnell.	703-938-3525
TEXT WIZARD	Dick Knisely....	703-476-0529
	Clarence Connelly	703-437-6353
LETTER PERFECT	Dean Miller.....	703-560-3533
	Nora Bolton.....	703-476-9690
	Steve Steinberg.	703-435-2962
	Rick Reaser.....	703-644-0578
SPEEDSCRIPT 3.0	Karl Baker.....	812-232-0521
	Ron Kyle.....	812-232-0521
ST WRITER	Alice Barney....	703-978-9376
FIRST WORD	Joe Kuffner.....	703-759-2507
WORD WRITER	Terry White.....	703-560-7726
SPREAD SHEETS		
VISICALC	Norma Bolton....	703-476-9690
SYNCALC	Dick Knisely....	703-476-0529
	Don Tucker.....	301-229-5379
	Bob Waterfield..	301-840-0795
SYNTREND	Bob Waterfield..	301-840-0795
HOME ACCOUNTANT	Joe Di Benedltto	703-323-0120
DATA BASES		
SYNFILE	Bob Waterfield..	301-840-0795
DATA PERFECT	Gary Purinton...	703-476-8391
	Don Tucker.....	301-229-5379
	Dean Miller.....	703-560-3533
MEGAFILER	Rick Reaser.....	703-644-0578
FILE MANAGER	Scott Trump.....	703-323-7184
ADD ONS		
POWER PADS	Dick Knisely....	703-476-0529
KOALA PADS	Jim Stevenson Jr.	703-378-4093
DISK OPERATING SYSTEMS		
DOS 2	Dick Caldwell....	703-356-4248
DOS 2.5	Mathew Spolin....	301-656-5673
TOP DOS	Bud Stolker.....	703-370-2242
SMART DOS	Lee Givens.....	301-871-5417
DOS XL	Terry White.....	703-560-7726
SPARTA DOS	Mike Trubow.....	301-757-2954
CHIPS		
65C02	Bruce Blake.....	301-599-8888
MUSIC		
ATARI MUSIC COMPOSER		
	Steve Steinberg..	703-435-2962
MUSIC CONST SET	Steve Steinberg..	703-435-2962
	Dick Knisely.....	703-476-0329
ADV MUSIC SYS	Steve Steinberg..	703-435-2962
BANK STREET MUSIC WRITER		
	Steve Steinberg..	703-435-2962
MIDI	Mike Lehr.....	703-931-9447
RAMBOARDS		
256K XL	Gary Purinton....	703-476-8391

NEEDED

ANTIC CHIP, DOS 3, LIGHT PENS, PADDLES, JOYSTICKS, HOMEWORD, ANCHOR, MARK 7, and <301> volunteers in each section

HARDWARE(800,800XL,130XE)

ATARI 130XE	CALL
65XE	CALL
1050 DISK DRIVE.	CALL
OMNIVIEW 80 COLUMN FOR 800XL AND 130XE INSTALLED	45.99
US DOUBLER DOUBLE DENSITY FOR 1050 INSTALLED	59.99
HAPPY ENHANCEMENT FOR THE 1050 INSTALLED	139.99
256K UPGRADED FOR 800XL TURN YOUR 800XL INTO A 130XE WITH 256K MEMORY	64.99
INSTALLED	89.99
US DUPLICATOR	135.99
INSTALLED	149.99
PR CONNECTION	59.99
850 INTERFACE	119.99
SUPRA 115	39.99
XETEC	39.99
XEM 301 MODEM	39.99
600XL 64K UPGRADE	39.99
R TIME CART	59.99
SUPRA 64K PRINTER BUFFER	59.99

PRINTERS

PANASONIC KXP-1080i	~~219.99~~ $199.99
KXP-1091i	279.99
KXP-1092	329.99
KXP-3131	269.99
KXP-3151	379.99
CITIZEN MPS-10	269.99

PRINTER ULITITIES

PRINTSHOP	29.99
COMPANION	23.99
EXTRA GRAPHICS FOR PRINTSHOP PRINTSHOP (LIB1,2,3)	19.99
MASUDASOFT(LIB1,2)	9.99

XLENT
CARRY A FULL LINE

BUSINESS APPLICATIONS

SYNCALC(FOR THE 130XE)	29.99
SYNFILE(FOR THE 130XE)	29.99
B/GRAPH	29.99

LANGUAGES

BASIC XL	39.99
BASIC XL TOOLKIT	19.99
BASIC XE	49.99
MAC65	49.99
MAC65 TOOLKIT	19.99
ACTION	49.99
ACTION TOOLKIT	19.99
LOGO	29.99
KYAN PASCAL(IMPROVED)	59.99

WORDPROCESSOR

ATARIWRITER	29.99
ATARIWRITER PLUS	29.99
PAPERCLIP(SPELL CHECK)	39.99
XLENT'S FIRST WORDPROCESSOR (GRAPHICS&TEXT MIXED)	25.99

520ST HARDWARE

CALL FOR PRICING	
AUTHORIZE 520ST DEALER	
AUTHORIZE 1040ST DEALER	
AUTHORIZE ST SERVICE CENTER	
SF354	CALL
SF314	
DISK DRIVE CABLE 6FT.	19.99
512K UPGRADE FOR 520ST INSTALLED.	149.99
SUPRA HARD DRIVE 20MB	~~629.99~~ $549.99
30MB	849.99
ATARI HARD DRIVE*20MB	629.99
ATARI 1040 OWNERS JOYSTICK	
EXTENDER(EASY TO GET TO) EVERY DAY LOW PRICE	29.99

APPLICATION (ST)

WORDWRITER	49.99
DATAMANAGER	49.99
SWIFTCALC	~~59.99~~ $49.99
CAD 3D	39.99
1ST CAD	39.99
EASYDRAW	59.99
PUBLISHING PARNTER	99.99
TYPESETTER.ELITE	49.99
DEGAS ELITE	49.99

ENTERTAINMENT

800

ULTIMA IV	39.99
ULTIMA III	39.99
SILENT SERVICE	27.99
NINJA	7.99
HARDBALL	19.99
MINIATURE GOLF	25.99

520 ST

STARGLIDLER	29.99
DEEP SPACE	35.99
SILENT SERVICE	27.99
STAR RAIDERS	25.99
PISON CHESS	49.99

520 ST LANGUAGES

OSS PASCAL	49.99
ST DEVELOPMENT KIT	275.99
GFA BASIC	59.99
MACRO ASSEMBLER	59.99
MODULA.II	59.99
MARK WILLIAMS C	109.99
MEGAMAX C	~~199.99~~ $179.99

520ST WORDPROCESSORS

FINAL WORD	85.99
REGENT WORD WITH REGENT SPELL(GREAT)	39.99
HIPPOWORD	59.99
TEXTPRO	39.99

520ST TELECOMMUNICATION

PC INTERCOMM	75.99
ANSIGRAF	69.99
ST TERM	27.99

OVER 600 SOFTWARE TITLES IN STOCK

****SPECIAL OF THE MONTH****

L&Y's FIRST HARDWARE PROJECT
512K UPGRADE FOR THE 520ST
INSTALLED FOR $ 149.99
DISPLAY MODEL IN THE STORE

VISA MasterCard CHOICE

L&Y ELECTRONICS

ATARI SERVICE

Moving to NEW Location!

Store Hours
M-F 10 to 8
Sat. 10 to 7

703-494-3444, Metro 643-1729
13664 JEFFERSON DAVIS HWY
WOODBRIDGE, VA 22191

SALE ENDS March 31, 1987 NO RAINCHECKS—IN STOCK ONLY

CURRENT NOTES ST LIBRARY

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

UTILITY DISKS

#18: UTILITY #1. 34 misc. utility programs
#25: DEGAS UTILITIES. fonts, pr drivers, conversion prgs.
#30: UTILITY #2. Assembler; Forth-83; printdir; Labels...
#36: DESK ACCESSORIES. calendar, clocks, screen snapshot.
#61: PRINTER DRIVERS. First Word, ST Writer, Degas
#63: UTILITY #3. WP desk acc,floppy indexer,file squeeze.
#72: UTILITY #4. Format/copy 400K/800K;proff; desk accs..
#73: UTILITY #5. archiver; disk lib prgs; disk speed x...
#81: UTILITY #6. dir lister;quick formatter; Font Editor.
#94: UTILITY #7. print out strips of picture files,.....
#95: UTILITY #8. format inc capacity on SS/DS disks.....
#102: UTILITY #9. bulk erase, disk format acc, disk labels
#107: ST RAM DISKS. 25 ram disks + 7 auto loaders
#113: UTILITY #10. HD backup; undeleter; format3'''

GAMES

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

PICTURE DISKS

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

TERMINAL PROGRAMS

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

GRAPHICS

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

MUSIC

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

LANGUAGE DISKS

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

APPLICATIONS

#15: ST WRITER, Ver 1.70. ST WRITER with all doc files
#29: MICROEMACS. Ver 3.7I. editor, ref man, tutorial
#59: VIP TEMPLATES. 20 VIP templates
#68: CAD 3D PICTURES. 12+ picture files for CAD 3D
#69/70: GRAPHIC ARTIST DEMO. Ver. 1.52.
#74: ST SAMPLER #1. Demos of Synsoft's Gen Ledger, SOLAPAK, and TechMate Chess prg; more ...
#89: ST WRITER -- SPANISH VERSION. (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.

CPM EMULATOR DISKS

#86: CP/M-80 EMULATOR TOS DISK. CP/M-80 V2.2
#87: CP/M-80 DISK #1. Disk in CP/M-80 format: 24+ prgs
#C1: CP/M-80 TELECOM DISK #1. mexst & docs

#C2: CP/M-80 UTILITY #1. 45 utility files
#C3: CP/M-80 GAMES #1. adventure, aliens, blkjak...

ST-MAGIC DISKS

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

#M0: MAGIC SAC 3.5. most recent ver of MAGIC program, a beta of coming ver. 4.0.
#M1: MAGIC FORMAT BOOT DISK. Altered Finder, Edit, REdit, MacLuff, System Folder (Finder 4.1)
#M2: TELECOM DISK #1. Free Term 1.8, Termworks, Kermit
#M3: UTILITY DISK #1. Switcher, PackIt, Slicer, MacDump, RMover, Reverse Screen, DES, Font Doubler, more...
#M4: GAME DISK #1. Missile Command, Solitaire, MacLuff, Space Bubbles, Back Gammon, Smile, Bash Big Blue, Munch, Meltdown, Maze 3D, Snow, Curves
#M5: DISK LIBRARIAN. Disk Librarian Ver 1.81
#M6: GAME DISK #2. Ashes, Wall Game, Wheel, Black Box, Snake, Destroyer, Hex Puzzle, Office Attack, Symmetry Demo.
#M7: GAME DISK #3. MacYahtzee, Wiz Fire, MacCommand, MacBUGS, GO, Break the Bricks.
#M8: DESK ACCESSORIES #1. DA Tester, F/DA Move, MockPrint, MockTerminal, MockWrite, MiniWriter, Moire, ArtThief, Ascii, File Hacker, more....
#M9: UTILITY #2. File Hacker, ResEd, RamStart 1.3, Font Doubler, Change App.Font, Desk Acc. Mover, MacTools 5.4, Convert Desk Acc.
#M10: GRAPHICS #1. Living Art, Pattern, Painter's Helper, Moire 3.0, Nightmare, Rotations, Ball Demo, Hot Sex, Meltdown, View Paint 1.1, Curves, Fourth Dimension, Pics:(bugs, amy, pisces, brooke, garf).
#M11: PRINT UTILITIES. Chooser, Ink, F/DA Move, Font Mover, Fast Eddie, more ...

ANALOG DISKS

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

==========
NEW DISKS INTRODUCED THIS MONTH
==========

#104D: ALADDIN ST DEMO DISK. Demo of new Visual Interactive Media by Disk Publicatons, Inc. Incredible graphics on your ST!
#105: CN MOVIE. Demo of animation effects possible on your NEO and DEGAS pictures using MAKE IT MOVE.
#106: SMOOTH TALKER DEMO. Demo of 5 talking educational programs from First Byte: Speller Bee, Kidtalk, Mathtalk, First Shapes, Speech Sampler.
#107: ST RAM DISKS. 25 Ramdisks, 7 Auto Loaders (fdcopier, intramdk, loadram, eternal, yard, ultcopy, fastramd, autoramd, mike5, ...)
#108: TINYPICS NO. 1. GHOST BUSTERS (cabbie, danak, danblast, demon2, demon4, gostmbl, marshm2, sigg2y2, sigourne, staypuf2, vincel2, weenie); RAIDERS (leathomp, lighteye, ouch, spike, wellofsl); TNYVIEW3.PRG, TNYSTUF2.PRG.
#109: TINYPICS NO. 2. EMPIRE STIKES (ata1, darth, falcoln2, falcon, hansolo, stardes2, tiefigh2, xwing, yoda); SHUTTLE (astronau, blastoff, ground, landing, landing2, piggybac, spaceman, spmanclr, tower, treads); TNYVIEW3.PRG, TNYSTUF2.PRG.
#110: MODULA-2 SAMPLE DISK #3. Complete set of Modula-2 source code from the BBS of The Journal of Pascal, Ada & Modula-2; Samples of building library modules using AES calls; Source to access Russ Wetmore's Clipboard routines; String Library routines and more.
#111: PASCAL SAMPLE DISK #3. Complete source to ATARTREK (Star Trek for the ST); Complete source to CHECKERS; Sample routines to format a disk from the OSS BBS; Sample routines to read in a DEGAS picture file; GEMDOS calls from Pascal and more.
#112: GAME DISK #5. Checkers with 6 skill levels; A slot Machine; Warzone and more.
#113: UTILITY DISK #10. TURTLE a hard disk backup utility; PROGCALC a programmable calculator in medium rez; UNDELETER the BEST undeleter commercial or PD; FORMAT3 (for best results in FAST READ use 9 sectors a track 82 tracks as 10 sectors a track is slower); Alan Pages' VIDCOL.PRG to convert DEGAS Elite files to ASCII simulations of Vidtex for viewing by Flash.
#114: MUSIC STUDIO 'SNG' DISK #2. Over 40 SNG files for use with Music Studio that play without a MIDI keyboard/speaker system
#115: ANIMATOR DISK. The Aegis Animator Player with four ARC'ed routines to play. A public domain animator of sorts to have fun with.
#116: ST SOFTWARE LIST. Complete listing of all available software for the ST compiled by Andy Nicola. (This disk is updated monthly)

****
* PINFEED LABELS for your ST Disks like those used on *
* CN Library disks: 500($10); 1,000($15), 2,000($25), *
* 3,000($30). Price Includes shipping. *
****

NORTHERN VIRGINIA ATARI USERS' GROUP (NOVATARI)

President.....	G. Weatherhead.	(703) 938-4829
VP-ST.....	Terry White....	(703) 560-7726
VP-8-bit.....	Gary Purinton..	(703) 476-8391
Treasurer.....	Curt Sandler...	(703) 734-9533
Secretary.....	Bob Zimmon.....	(703) 476-5924
Public Relations..	Gary Scott.....	(703) 590-1906
Membership.....	Earl Lilley....	(703) 281-9017
Acquisitions.....	Palmer Pyle....	(703) 437-3883
Program Managers		
Main Meeting....	Michael Friedman.....	378-0146
ST Meeting.....	Ian Charters...	(703) 845-7576
Asst ST Prog Man	Joe Kuffner....	(703) 759-2507
Disk Librarians		
8-bit.....	Evan Brooks....	(703) 354-4482
ST.....	Allen Clarke...	(703) 250-4469
Asst ST.....	Dale Radtke....	(703) 569-8795
Public Domain Disk Editors		
8-bit.....	Roy Brooks.....	(703) 750-0146
ST.....	Ed Seward.....	(703) 573-5022
MIDI Keyboard.....	Mike Lehr.....	(703) 931-9947
Other SIGs		
Beginners SIG...	Gary Purinton..	(703) 476-8391
Telecom SIG.....	Ted Bell.....	(703) 455-5312
	Ed Seward.....	(703) 425-0575
ST Programmers..	Ken Whitesell..	(703) 636-4756
MS DOS SIG.....	Mike Gibbons...	(703) 440-0380
SYSOP.....	Ted Bell.....	(703) 455-5312
Bulletin Boards		
8-bit.....	ARMUDIC.....	(703) 569-8305
ST.....	WAACE ST.....	(703) 569-3227

****
* 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 Lane *
* Burke, Virginia 22015 *
****

¦NEW MEMBERS: Dues are $20/year which includes a sub- ¦
¦scription 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 the Sterling Library from 7:30 - 9:30 on the first Thursday of the month. Contact Wayne Wilt 437-6159.

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

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

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

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

President's Report

NOVATARI is not just waiting for ATARI, we're ahead of the game. Note the list of credits. There is an MS-DOS SIG with a 44-disk library ready to go when the ATARI PC or the black box for the ST appears (thanks to Mike Gibbons). The ATARIFEST scheduled for October is rolling also. Thanks to Ed Seward and all of you eager, dedicated ATARI enthusiasts willing to take the tiger by the tail.

8-Bit SIG members will want to get their TURBO Basic (demonstrated at the last meeting) from the library in March. English translation (the original is in German) will soon be available through the courtesy of AURA's Rick Kellogg Jr. There is a need for 8-Bit members to help out by sorting through existing programs and organizing them onto disks. Interested members should contact Al Friedman (425-0575) or Roy Brooks (750-0146).

Dues for NOVATARI are now $20.00/year. If you sent $15.00, your membership is prorated for eight months. Check your CN label for your renewal date. Be sure to send you check in early or you might miss an issue of CN. Did you know that "Scrooge" has an 8-Bit ATARI? Herb Hermann is back after a long run of two performances on Sundays.

The next NOVATARI Board meeting will be held at the big house at Nottoway Park in Vienna, April 1st at 7:30 pm (Yes, it is April Fool's Day and no, it is not a joke!). We have a great program lined up for March 8th, 6-7:00 pm. Creative Solutions will demo their "Multi-FORTH ST" package. See you all there!!

ATARI USERS REGIONAL ASSOCIATION (AURA)

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

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

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

AURA REPORT FOR FEBRUARY 87

1. Meetings - Our next meeting will be March 5th (the first Thursday).

2. Meeting plans - Vice President Barry Marcus is responsible for coordinating meeting agendas. Please contact Barry to get on the agenda. Whenever possible we will coordinate demonstrations so that similar 8 and 16 bit products will be featured.

3. 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 - Bill Frye demonstrated "Games to Drive Away the Winter Chill", a collection submitted by Tom Jarrell. AURA is working on gathering and documenting a "starter kit" for new users (and for some old users who want to try something new). This will be packaged as a multi-disk set to be sold at computer fairs as well as through our library.

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. AURA will be reassembling some items into disks organized along functional lines. 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.

6. 16 bit tutorial - John Barnes demonstrated STWRITER version 1.70 and a persistent Ramdisk from the WAACE BBS. The session on Tax programs was deferred until March because of a lack of volunteers.

7. Donations to Cannon Road School - Soft Logik has donated Publishing Partner to the project. This is a very welcome donation because the school particularly wants to publish a nice newsletter. Other authors or vendors who are interested in supporting this project should contact Bill Schadt our educational liaison officer.

8. WAACE BBS - The ARMUDIC BBS now available to 8-bit owner who are members of WAACE clubs on the same subscription basis as the WAACE ST board. I do not have any direct knowledge of the traffic pattern, but I am confident that Ted Bell and his helpers have done a fine job. At these prices there is no reason why you cannot be hooked into a vital network of Atari users. I have found the level of discourse to be fairly high. The boards serve other interests besides downloading software.

9. 1987 Dues - 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. Until we can implement a membership reminder system we will continue to send out one copy of CUrrent Notes past the expiration date. We mailed 256 copies of Current Notes for February 87.

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).

NATIONAL CAPITAL ATARI USERS' GROUP (NCAUG)

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

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

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

WOODBRIDGE ATARI COMPUTER USERS' GROUP (WACUG)

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

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

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

<><><><><><><><><><><><><><><><><><><><><><><><><><><><><><><><>

FREDERICK ATARI COMPUTER ENTHUSIASTS (FACE)

President........	Mike Kerwin......	301-845-4477
Vice President...	Roger Eastep.....	301-972-7179
Treasurer........	Buddy Smallwood..	301-432-6863
Librarian........	Chris Bigelow....	301-662-4691
Secretary........	John Maschmeier..	301-271-2470
SYSOP............	Sam Yu...........	301-662-5586
Bulletin Board...		301-569-8305

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 $20/year/family. Join at meeting or send check, payable to FACE, to Buddy Smallwood, P.O. Box 300, Keedysville, MD 21756.

SECRETARY'S REPORT: At the February meeting our users group enjoyed a demonstration of Desktop Publishing for the ST, presented by Bruce McLendon. Also, Chris Bigelow demonstrated our disk of the month, "CAD-3D", for the 8-bit line.

In March, we are looking forward to a side-by-side demonstration of "Silent Service" on both the ST and XE. This will be ably demonstrated by Buddy Smallwood and Chris Bigelow. We will also have our annual election of officers.

SOUTHERN MARYLAND ATARI USERS' GROUP (SMAUG)

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

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

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

If this ad looks like we typeset it, *look again. . .*

Go ahead. Try looking at it with a magnifying glass. You'll probably still think it was typeset. But it wasn't.

This entire ad was created on an Atari ST® with Publishing Partner™ then printed out on the Linotronic 300™ Lasersetter from Allied. At 2,540 lines per inch, the Linotronic's resolution is as close to actual typesetting as you can get.

And you can get the Linotronic's quality with CACI Graphics Services.

CACI Graphics Services has long been providing the Macintosh® community with LaserWriter® and Linotronic print-out services. Now, with the introduction of Publishing Partner, the Atari ST community can use these PostScript®-compatible printers too!

Simply prepare your document using Publishing Partner for final layout, decide on Linotronic or Laserwriter printout, and call CACI Graphics Services for production.

Within 24 hours (for most standard jobs), you'll receive your ready-to-use copy on plain bond paper, RC paper, or film.

It is as easy as that. And because we never tamper with your disks' contents, you can be confident of your material's integrity.

With CACI's laser print service, you never again have to settle for chunky dot matrix or monotype laser output.

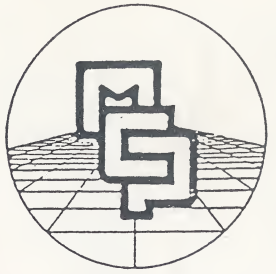
Your documents and drawings can have the true, professionally produced look that is far easier to read and that commands attention.

Call our customer service line for information on scheduling, pricing, or job preparation.

CACI
Graphics Services
8260 Willow Oaks Corporate Drive
Fairfax, Virginia 22031
(703) 876-2231

Morgan Communications Products

(301)983-0925



Morgan Communications Products

(301)983-0925

Atari 8-bit computers

HARDWARE	SOFTWARE
US Doubler...$29	Cheap Games
P:R:.....$59	FROGGER, SUPER COBRA, Q-BERT, BUCK ROGERS, INVITATION TO PROGRAMMING I, II AND III
ENTIRE 130XE SYSTEM...COMES WITH 1050, 1027, ATARIWRITER+, and 4 games for only **$395!**	$7.99 each

Atari ST

CALL FOR PRICES ON ST SYSTEMS!

PUBLISHING PARTNER --> $99

I.S. Talk....$49

VIP Professional GEM VERSION..$179

dBMan...$119.99

GRAPHIC ARTIST $149.99

MODEMS

A DIME A BAUD!

That's right!! A complete fully Hayes 1200 compatible 1200 baud modem with volume control and speaker for just

$119.95!

AVATEX 1200HC MODEM

ST PRINTER OR MODEM CABLE..$15

WE'RE NOT JUST COMPUTERS

In addition to our large selection of computers and computer accessories for all computers, MCP also carries VIDEO EQUIPMENT, AUDIO EQUIPMENT, TELEPHONES, ANSWERING MACHINES, TYPEWRITERS, COPIERS, TRANSCRIBERS, CALCULATORS, CD PLAYERS, RADAR DETECTORS, WATCHES, and other equipment by manufacturers like PANASONIC, MAGNAVOX, GTE, CODE-A-PHONE, CANON, CASIO, SHARP, PIONEER, TDK, SCOTCH, MAXELL, SANYO and many other companies!

Notcher...$6.99
Mouse Fur.$7.50
Mouse Pad.$9.99

INLAND SURGE PROTECTOR $19.99

LOW Disk prices! (call)

DISK CASES

ALLSOP 5¼" 60 capacity..$9.99
INLAND 5¼" holds 120...$12.99
ALLSOP 3.5" holds 30....$9.99

PLEASE ADD $3.00 POSTAGE AND HANDLING FOR EACH COMPLETE ORDER. MARYLAND AND DC RESIDENTS PLEASE ADD 5%(MD) OR 6%(DC) SALES TAX. FREE CATALOG SENT WITH ORDER.

Please call or write for pricing and information on items not listed here!

MCP, PO Box 76175, Washington, DC 20013 (301)983-0925