ATARI INTERFACE

VOLUME 3
DEC. 1991

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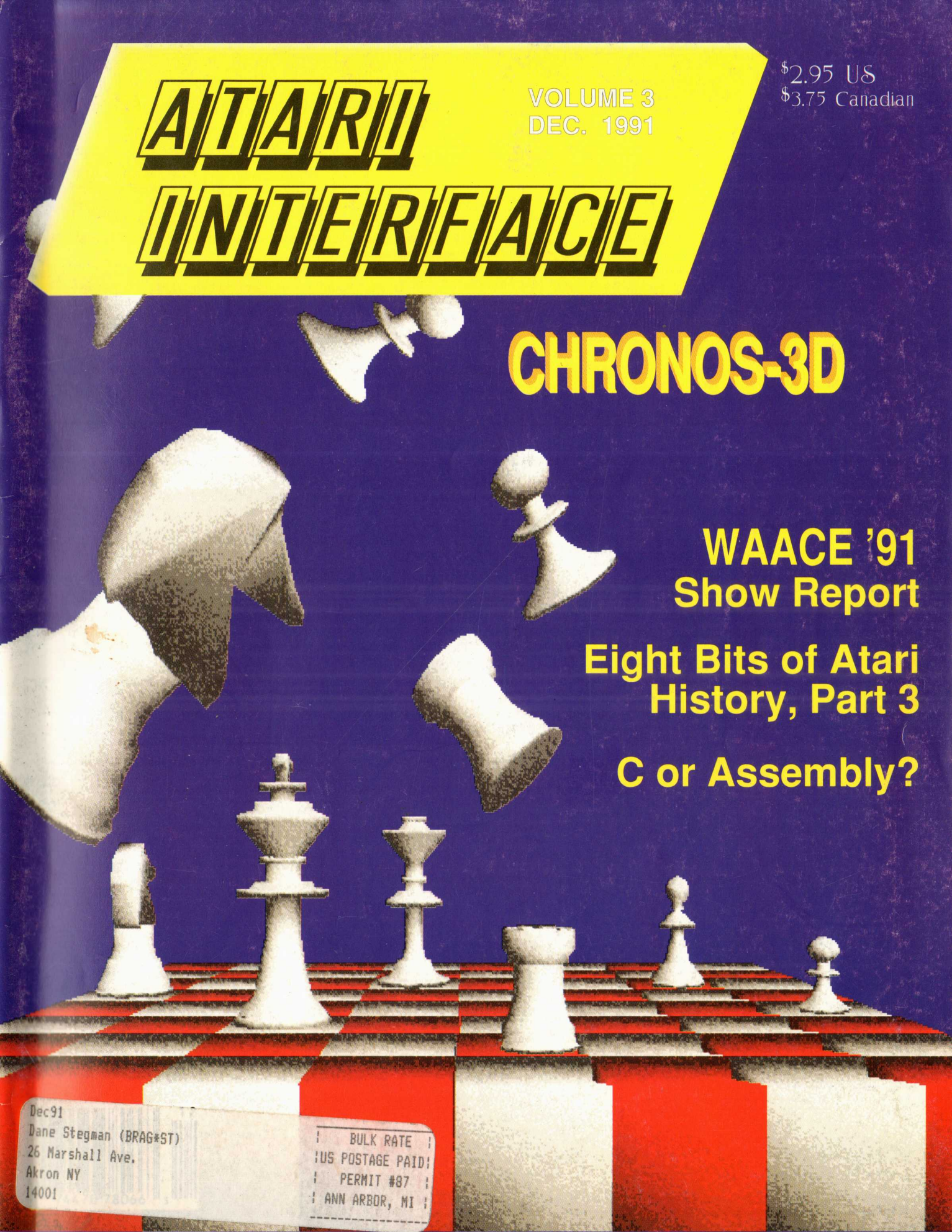

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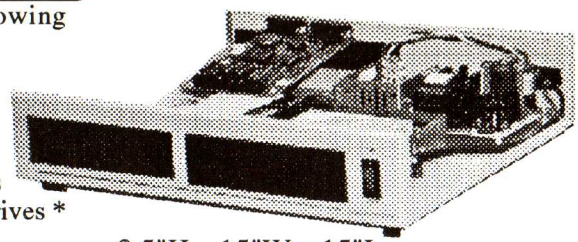

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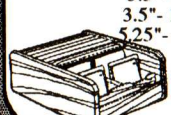

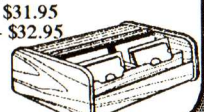

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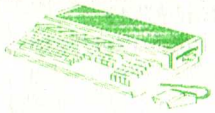

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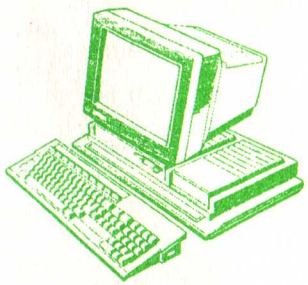

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Volume 3

ATARI INTERFACE

Your Connection to the User Community

Dec. 1991

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Animated chess pieces created from CAD-3D objects rendered in TT Medium Resolution with Lexicor Software's Chronos-3D. CAD-3D chess board and pieces came from Germany. Pieces were rendered with Phong shading in 16 colors. Animation was saved as an IFF image file and loaded into PageStream 2.1.

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ATARI INTERFACE

Your Connection to the Atari Users Community

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William Rayl / Patricia Snyder-Rayl

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Editor — Bill Rayl
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Paul Alhart, Ed Hall,
Tim Holt, Dave Plotkin

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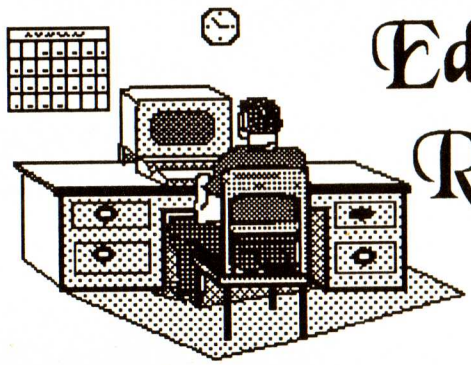

Editorial Ramblings

Our hopes for a Happy Holiday and the best of New Years for all our readers!

AIM finishes off another year of supporting Atari users. This year has been an eventful one, especially for magazines. We've seen Antic merge into STart, then STart ceasing publication altogether. ST Journal changed into AtariUser, and Atari Explorer is roaring back after some earlier difficulties.

We look forward to another year of Atari excitement— with the ST Notebook, the STylus and a new TT. Personnel at Atari headquarters has been fairly stable, so we may see some earlier laid plans have time to bear fruit.

Also this year, we've seen prices drop on peripheral items. Laser printers are more affordable, and even color scanners are under $1,500 now! Damark even has a dual standard OkiData 9600 baud modem for sale for $299! This would make a great gift for your telecommunications addict! For more information, call Damark at (800) 729-9000.

A membership to CompuServe or GEnie may be a good gift for your favorite Atari user. These online services keep Atarians up-to-date on what's happening in the Atari market. 9600 baud users may want to look out for hidden connect charges with GEnie, though. Basic* Services doesn't apply to 9600 baud callers. Charges for non-prime time use are $18/hour (three times the 1200/2400 rate) and prime time use is $30/hour. With CompuServe, charges are $22.50/hour anytime! That's less than double the rate for 1200/2400 baud, and you're connecting at four times the speed. For more information on CompuServe, call (800) 848-8199. For information on GEnie, call (800) 638-9636.

Next month, look for a review of PageStream 2.1, Soft-Logik's new font and business forms packages, PageAssistant from Spar Systems, the Chicago ComputerFest by Atari and much more!

Bill & Pattie Rayl

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Supra 105MB Hard Drive (Quantum 11ms)	$699
SupraDrive 44R (Removable Cartridge Drive)	$699
SM124R Mono Monitor*	$149
SC1224R Color Monitor*	$269
SC1435 Stereo Color	$379

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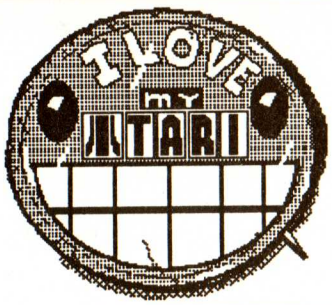

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MegaPaint Professional

CodeHead Software has announced availability of MegaPaint Professional, a full-featured bit-map and vector graphics tool for Atari ST and TT computers. Megapaint features some unique editing tools, such as for creation of rhomboids, equilateral polygons with 3 to 32 sides, circular or elliptical ring sections, perpendicular and parallel lines, concentric circles and bezier curves. The package also boasts extensive text support using bitmapped and vector fonts, powerful block and lasso functions and a whole lot more.

MegaPaint also supports "virtually all printers." Printer drivers supplied with the program can be easily edited to adapt to any printer. Pictures can be loaded in MegaPaint's .BLD format, standard .IMG format, MS-DOS .PCX format, Degas 32K format, or STAD format (.PAC). Vector graphics can be exported in CVG format.

MegaPaint is designed to be easily expandable via external modules, and import and export modules are already in the works for several other picture and vector formats. The program runs on any ST/TT with a monochrome monitor in resolutions from 640x400 up to 8192x8192 and even supports networking and scanners! MegaPaint retails for only $175. CodeHead Software, (213) 386-5735 voice, (213) 386-5789 FAX.

STalker Offer!

Gribnif software has a special offer for all CompuServe users—for a limited time, CIS users can purchase their excellent STalker 3.0 telecommunications program for only $39.95! STalker sports such features as the ability to run as an ACC or PRG, built-in Xmodem, Ymodem and Zmodem file transfer capability, an excellent Scripting language, and GDOS font support. Two of STalker's best features are its multiple port support (be online at two or more locations at the same time!) and the ability to run in the background.

To take advantage of this offer, call Gribnif Software at 1-800-284-4742 and mention you are a CIS user wanting the "CompuServe Special" on STalker (or send CompuServe E-Mail to 75300, 1131 for additional information.)

Migraph News

Migraph has updated their popular Touch-Up software to version 1.65. The new version has a "Save as Gray" option that turns dithered patterns from the Migraph or Golden Image hand scanners into gray shades. Now, you can save 16 level true gray scale IMG or TIFF files, 31 level "apparent" gray scale IMGs or TIFFs, or even full 32 gray shaded TIFF images!

The big advantage to gray scales over dithered patterns is that grayscale images can be resized without distortion. To upgrade to the new version, return your original Touch-Up disks to Migraph along with payment—$24 if upgrading from version 1.5, $44 if upgrading from version 1.0.

Also available from Migraph is the Merge-It and Scanning Tray hardware/software combo. The Scanning Tray consists of a molded plastic tray (which holds artwork in position) and a cradle (which holds the scanner head). Using the Scanning Tray, the user can accurately scan a full page in two strips. The cradle is designed to hold the Migraph, DFI, Genius, Golden Image, Logitech, Marstek 105 or Complete Hand Scanners.

Merge-It is a software utility that merges the two strips into one complete image. The program can be used as a program or a desk accessory. Retail price for the Scanning Tray and Merge-It combo is $149.

Scan & Save, another Migraph release, provides the capability to scan and save an image without all the editing/conversion tools found in Touch-Up. If you have a system with little memory or don't need editing capabilities, this is the program for you. Scan & Save can be used as a PRG or ACC, works with the Migraph or Golden Image hand scanner and has the same gray scale saving options of Touch-Up 1.65. Retail price is $20.

By the end of the year, Migraph also plans to ship an OCR (Optical Character Recognition) package for the Atari ST/TT line. Contact Migraph for details, (206) 838-4677 voice, (206) 838-4702 FAX.

Sales-Pro Update

Sales-Pro, the popular Point-of-Sale/Inventory Control system from Hi-Tech Advisers has been updated to version 6.00. New features include integration of General Ledger functions, ability to set percentage discounts and taxable/nontaxable status on a customer-by-customer basis, support for three separate sales tax levels and much more. Sales-Pro ships in single- or multi-user configurations, and a number of external modules and accessories are available. For more details, contact Hi-Tech Advisers at their *new* location—PO Box 128, Ravena, NY 12143-0128, (518) 756-3800 office/non-US orders, (518) 756-6666 technical support, (518) 756-3539 FAX, 800-882-4310 US orders.

Typeface Library

Soft-Logik Publishing Corp. has released the new Soft-Logik Typeface Library. Soft-Logik has licensed 600 Postscript Type 1 fonts (as well as EPS graphics) from Image Club, a leading developer of Postscript fonts and clip art on the Macintosh.

The new Typeface Library currently contains four bundles. Newsletter Fonts and Starter Fonts each contain eight Type 1 fonts and retail for $99.95. The Classic Fonts and Designer Fonts packages each contain 16 Postscript fonts and retail for $199.95. Soft-Logik Publishing Corp., (800) 829-8608 orders, (314) 894-0431 technical support, (314) 894-3280 FAX, (314) 894-0057 BBS (3/12/24/9600 baud).

Double Click

One of the hottest new products to be released is Data Diet from Double Click Software, especially if you are a hard drive owner. The Data Diet package offers "real time data compression and uncompression" of all your

files—text files, word processor or DTP documents and executable files. What this all boils down to is that all your files take up a whole lot less space on your drives. If you're a hard drive owner, using Data Diet can give you back well over 60% of your hard drive's space, based on our initial tests. For a 40 meg hard drive, that's better than adding a second 20 meg drive to your system! Retail price is only $74.95, and that's a lot cheaper than a second hard drive.

Double Click will also be shipping the Game Workbench soon. This "game authoring system" allows practically anyone to write commercial quality games quickly. Games written under the Game Workbench can include such things as digitized sound, scrolling, sprites and animation sequences. Contact Double Click Software, (713) 977-6520 voice, (713) 944-0108 BBS.

Index Legalis

Ralph Turner has written the Third Book of Atari ST Topics, and it is another "must have" addition to your reference library. Following in the successful format of The Atari ST Book and Intermediate and Advanced Atari ST Subjects, Turner's third book deals with complex topics in plain English. The new books covers topics such as the TT030 and Mega/STE, modems and telecommunication software, laser printers, CompuServe and GEnie, null modems, MIDI keyboards and sequencing software, bulletin board systems, and PD and Shareware. Suggested retail is $16.95. Index Legalis, PO Box 1822-3, Fairfield, IA 52556, (515) 472-2293.

Grammar Expert at 1.10

Phil Comeau Software announced the release of version 1.10 of the Grammar Expert program for the Atari ST/TT. Grammar Expert is an online reference for the rules of English grammar, punctuation, and effective writing. The package is a highly useful aid for both professional and casual writers. As a desk accessory, Grammar Expert is accessible while in your favorite GEM-based word processor.

Grammar Expert is like a computer-based reference book, with information presented in pages, a table of contents and an index. Using a "hypertext" environment, users can quickly flip from page to page or click on cross-indexed words to jump to a section in the "book" containing more details.

Version 1.10 contains several improvements to the software, including text pattern searching of Grammar Expert's table of contents; user-selectable display of cross-indexed "links" as bold, inverse, underlined and/or colored text; addition of a number of keyboard shortcuts; and saving of window position and size, as well as current window positions for the index and table of contents. Suggested retail is $59.95 US ($66.95 Canadian). Registered owners of 1.0 can upgrade by sending in their original disks with $5. Phil Comeau Software, (613) 825-6271.

Tracker Update

Version 3.0 of Tracker/ST, the leading mailing list/mail merge package for the ST/TT series, is now available from Step Ahead Software, Inc. Some of version 3.0's new features include one-click telephone dialing (modem required), duplicate name warning when adding names, the ability to copy a single record from one database to another with a simple keyboard or mouse command, completely unlimited filtering and a powerful new report which prints out Tracker/ST's unique Long Notes for as many people as the user requires, with one single command.

Other new features in Tracker/ST 3.0 include the ability to export names in any format (for use with WordPerfect, WordUp, WordFlair II and virtually any other word processor or database), expanded default settings and the ability to retain Tracker/ST's extended Long Notes when doing an export and import within the program. Author Nevin Shalit says he's taken all the suggestions offered by registered Tracker/ST owners and implemented every one of them in version 3.0!

Until the end of 1991, Tracker/ST 3.0 will be available for the same $79.95 price as earlier versions of the program. On January 1st, 1992 the retail price of Tracker/ST 3.0 will be $99.95. Registered owners of Tracker/ST 2.0 and greater may upgrade to 3.0 for $25 ($30 after 1/1/92). Users should not send in their original disk, but must include their completed registration card with their upgrade order if they have not already sent in their card. Step Ahead Software, 496-A Hudson Street #F39, New York City, NY 10014, (212) 627-5830.

IAAD News

Speaking of Nevin Shalit, Nevin was elected President of the Independent Association of Atari Developers (IAAD) at a meeting of the IAAD during the WAACE Atarifest. Shalit replaces Nathan Potechin of ISD Marketing, who stepped down after serving as President for the first two years of the IAAD's existence.

The IAAD is a group of registered Atari developers who work together in various marketing, instructional, and educational areas. Currently more than 50 developers make up the IAAD, which includes representatives from Canada and Europe as well as a full complement of US developers.

"I look forward to building on Nathan's excellent work in the coming year, by increasing our membership, and having IAAD members work together on specific projects which will benefit developers, dealers, end users, and Atari itself," says Shalit.

IAAD business is conducted mostly on GEnie. Developers interested in joining the organization should send E-mail to PERMIT$.

ATonce 386SX for Mega/STE

Vortex of Germany has released ATonce-386SX, a 386 IBM PC emulator for the Atari Mega STE. The emulator fits into the 68000 socket and requires no soldering. The board includes a 32 bit CMOS 80386SX 16MHz CPU and optional sockets for 512K of "Vortex Fast RAM" or 80387SX-16 math co-processor. Norton's SI rating of the emulator is 12.3 without the Fast RAM or 15.6 with the Fast RAM option.

Supported graphics modes include monochrome EGA/VGA, CGA, Hercules, Olivetti and Toshiba T3100. ATonce-386SX also supports hard/removable disks, 360K/720K/1.44MB floppies, serial ports, parallel port, mouse and clock, as well as sound support. For details, contact Vortex Computersysteme GMBH, Falterstrasse 51-53, D-7101 Flein, Germany, 07131 - 59 72-0 (within Germany—add international code and drop first zero for calls of non-German origin).

2600 Connection

The 2600 Connection, a newsletter devoted entirely to Atari 2600 owners/collectors, has now switched from a quarterly to a bi-monthly schedule. The newsletter has grown considerably in popularity since its first issue. Each issue of The 2600 Connection contains solutions, tips, and hidden messages in games, classified ads from other collectors/gamers, game reviews and more. A 6-issue subscription costs $6 and a sample issue is available for only $1. The 2600 Connection, 14 Blackburn St., Fairhaven, MA 02719-4334, (508) 997-1983.

Right on Target

David Plotkin
Contributing Editor

With the gift-giving season upon us, the friends or loved-ones of an Atari owner can count their blessings! Buying a gift for one of us is easy, and relatively cheap.

Unlike our bretheren who own PCs or Macs, accessories—even big ones—are quite reasonable. They are also not that hard to find—just check the pages of this magazine for some great mail-order buys—or check out your local Atari dealer if you are lucky enough to have one.

Best Trackballs

Those who don't have a lot of room on their desks, should consider the option of a trackball instead of a mouse.

The problem is that most trackballs are quite clumsy. They require that you move the ball with the palm of your hand, which makes it quite difficult to keep your fingers on the buttons that substitute for the mouse buttons.

The Best Trackball, however, solves this problem by placing the ball under your thumb. Thus, you can roll the trackball with your thumb, keeping your fingers on the buttons with no problem. As with any trackball, it takes a little getting used to, but adjusting to it is easier than any other trackball I've tried.

It costs about $55, and is available from San Jose Computer (408) 995-5080.

The More Things Change...

Remember the cordless mouse from Practical Solutions? It transmits its signals to a small receiver by infrared. As long as the mouse doesn't get too far from the receiver, it works pretty well. The shape of the mouse is really nice, too—it is small and rounded in all the right places.

Unfortunately, Practical Solutions went out of business some time ago.

Now, an outfit called Golden Image has come out with a cordless mouse that looks *exactly* like the Practical Solutions mouse, except that it has three buttons in the advertisement.

Strangely, the ad touts it as a two-button mouse. In fact, the similarity between the Golden Image mouse and the Practical Solutions mouse makes me wonder if the guys from Practical Solutions didn't start a new company.

The cordless mouse is $89.95, and they also have a cordless trackball.

The Golden Image hand scanner is packaged with Migraph's Touchup at a very attractive price—$199. Compared to Migraph's handscanner, this is quite a bargain. Just make sure you have a lot of room on your hard drive—scanned pictures can chew up space! Golden Image can be reaced at (800) 327-4482.

Hard Drives

Speaking of hard drives, Toad Computer has what every ST/TT owner will drool over—all different sizes of hard drive configurations, including drives with removable cartridges for virtually unlimited storage.

The Toadfile 44 Plus is $699, with 44 meg cartridges selling for $89. You can also get a variety of case configurations, and combinations of removable/fixed hard drives in one case. Toad has really built a reputation for providing good service and support.

You *do* have to wonder, however, where they got a name like "Toad." Of course, there are lots of names that don't seem to have any meaning right off (such as Gribnif, ICD, CodeHead, etc.). (800) 448-TOAD is the number to call for orders.

Incidentally, Toad has come out with a monitor switch so that you can switch between a color and monochrome ST monitor. The Toadswitch is $39.

I have a switch like this from Astra (SW2), but they are another Atari ven-

dor that is long gone. If memory serves, Practical Solutions also had a monitor switch. Oh well.

Emulators

Emulators have become big business, and can especially be appreciated if your Atari enthusiast has to use one of those "other" computers at work.

On the Mac side, there is, of course, Spectre GCR. This amazing product (in case you've been hiding in a cave for about three years) turns your Atari ST into a Macintosh. It includes the ability to read and write Macintosh format disks. It works very well, with better than 95% compatibility with Mac programs. The catch seems to be that the Mac ROMs that it requires are scarce, ever since Apple clamped down on the supply of both real and bogus Mac ROMs.

The PC emulator business has boiled down to two main companies. The Supercharger PC emulator is an external box that is available through Talon Technology and RIO Computers. Its advantage is that it sits outside the ST and is quite easy to hook up, requiring only a cable to chain into the DMA.

There have been promised enhancements for it, including an AT (80286) modification and a VGA card. Recent ads from RIO Computers have pricing for 12 MHz and 16MHz 286 versions of the Supercharger (called SCplus/286), but I have not personally seen these versions.

The other PC emulator is an internal board, termed "PC Speed." It has an AT version called "AT Speed." Both these products have good reputations, based on a variety of reviews—and the Supercharger I can vouch for personally.

Software

Software always makes a good gift, and there are some real bargains out there. Besides such powerhouses as LDW Power spreadsheet (now in version 2), ISD's Calamus SL and Soft Logik's PageStream 2.1 desktop publishing packages, Superbase 3 database and WordFlair II and WordPerfect, there are hosts of utilities that can make your life easier and more productive.

Almost anything from the Codehead line will be welcome (special emphasis on MultiDesk Deluxe, Hotwire and Popit), and let's not forget the Double Clicks!

DC Shower has become one of my favorite programs, letting me display any text or graphics file right from the desktop. The DC Data Diet program can compress files when they are saved to your hard drive, and decompress them automatically when you load the program, thus saving valuable disk space.

Rimik Enterprises' DT Paint is a full featured paint program that can run as a Desk Accessory. Kyle Cordes has come out with Abbreviator, which expands your abbreviations into full words—very handy if you do a lot of writing.

And then, of course, there are the games. Acres and acres of games. Some really good older titles can be picked up for as little as $5, and many more for $10. At these prices, you can afford to pick up the inevitable occasional dud.

If your favorite gamer likes to take their games with them, then a Lynx might be a nice idea. The newer version has a longer battery life, is smaller, and sells for about $100. Now, if Atari can just keep the supply of new games flowing.

What About AIM?

Or, you can buy a subscription to AIM—for all the Atari news that's fit to print (or is it "all the Atari news that fits?"). There is no better way to keep up with the world of Atari than to read up on your favorite vendors, services and products, not to mention their great PD/Shareware Disks of the Month.

Along with Atari Interface, subscriptions to other Atari specific publications like Atari Explorer and Current Notes also make great gifts.

Have a nice holiday season, and we'll see you next month!

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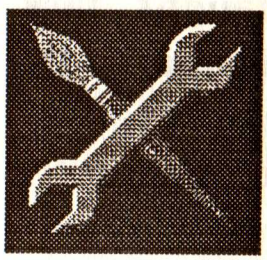

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Eight Bits of Atari History, Part 3 or The Way It Might Have Been

Ed Hall
Contributing Editor

Another lasting impact of the calculator wars was the lesson it taught Jack Tramiel—the importance of being vertically integrated.

This month, let's focus on Jack Tramiel and Commodore's impact on the marketplace under his "rule." Then, we'll finish up this installment with Tramiel at Atari.

Commodore Buys Apple!

The success story of Jack Tramiel, founder of Commodore Business Machines, is even more remarkable than that of Steve Jobs.

Born in Poland in 1928, he spent a major portion of his teenage years in the Nazi death camps. For him, there was no need of a pilgrimage to India to give meaning to his life, and his diet while at Auschwitz was not an experiment.

Tramiel became a survivor. This experience toughened him for survival in the business world, and especially in the personal computer market, where the pressure can be brutal.

Michael Tomczyk, a former Tramiel aid, observed that working at Commodore, or any other computer company in those days, was like being in a real-life videogame game—one slip, one false move, and you're dead.

At Apple, Steve Jobs frequently wept, while Tramiel, whose personal battle cry became, "Business is war," was once physically attacked by an employee who broke under the strain.

Apart from the difference in their ages and backgrounds, there are many interesting similarities between Jack Tramiel and Steve Jobs.

Both are equipped with powerful personalities, both employ confrontation as a management tool, and both are able to infuse in others their own compelling vision of the future. So powerful was this in Jobs that co-workers at Apple called him "the reality-distortion field."

At Commodore, Tramiel preached a brand of hard-nosed business that became known as "The Religion." Though his rule was paternalistic and autocratic, he was able to instill great loyalty among his top workers.

After coming to America, Tramiel started a typewriter repair shop and soon branched out into adding machines.

When the first microprocessors were developed in the early 1970s by Intel and Texas Instruments for use in calculators, it seemed a natural product for his company to get into. Commodore began selling a line of calculators based on a Texas Instruments chip. When Texas Instruments itself entered the market with its own calculators, it crushed most of its competitors and Commodore nearly went under.

Tramiel found a way to survive. He withrew from the American market and concentrated on his native Europe. There he built up a loyal following of customers whose brand recognition would soon carry them from Commodore calculators to Commodore computers.

Meanwhile, back in America, the calculator wars of the 1970's had two key impacts on the future development of personal computers.

First of all, it plunged into debt a small businessman named Ed Roberts. In a desperate attempt to turn around his company's fortunes, he decided to offer for sale a computer kit called the Altair. It was the first ever commercially available personal computer, and it launched the personal computer revolution.

Another lasting impact of the calculator wars was the lesson it taught Jack Tramiel—the importance of being vertically integrated.

Or in other words, don't depend on other companies for essential parts. Tramiel borrowed heavily in order to acquire MOS Technologies, thus providing a secure source of chips for Commodore calculators and watches. It was one of Tramiel's most brilliant moves.

As it happened, MOS Technologies had just developed a new microprocessor, the 6502. Intended for use in a computer, it was significantly cheaper to produce than the other leading chip on the market, Intel's 8080. To exploit this new chip, Commodore decided to enter the personal computer market. But before building their own machine, Tramiel decided to check out a computer already being developed around the 6502. He sent Chuck Peddle, the man who designed the 6502, and Andre Sousan, Commodore's VP of Engineering, to see Steve Jobs. Acquiring the Apple II would save Commodore a lot of development time.

Steve Jobs was ready to sell. He asked for $100,000, some Commodore stock, and employment for himself and Woz. But Jack Tramiel figured this was too much for a product being developed in a garage, and nixed the deal. Later, both Peddle and Sousan would defect to Apple.

In the meantime, however, Tramiel challenged Peddle to come up with his own design, and in 1977—the same year the Apple II and the Radio Shack TRS-80 Model I were introduced—the Commodore PET came out.

Commodore went on to corner the low-end home computer market, a success due in no small part to its "vertical integration." Thanks to Tramiel, Commodore was ready for combat when the dreaded Texas Instruments brought out its own personal computer. In the ensuing home computer wars of 1982-83, Tramiel had the satisfaction of crushing his old foe and driving Texas Instruments out of the personal computer marketplace.

In the process, Atari was badly mauled as it tried to keep pace with the savage competition.

Commodore's chief weapon in the home computer wars was the C64, a low-cost computer which matched the Atari 800 in graphics and sound. In 1983, Atari countered with the XL line, whose first model (the 1200XL) flopped miserably. The 800XL became Atari's main computer, but as the name suggests, it was basically a revamped 800. Though a good product, the 800XL offered no technical advancement over the Commodore 64. Even worse, Atari could not market it cheaper than the C64, because Atari was not vertically integrated.

Atari had become too moribund to find the kind of solutions it needed to remain an industry leader. In 1983, for example, rumors began to surface of a new computer with fantastic graphics and sound, a machine that many dubbed the 800's older brother because it incorporated custom graphics chips designed by Jay Miner.

Codenamed "Lorraine," this new product had started out as a game machine, but after the game market collapsed, it was converted to a computer. It was being developed by a small company called Amiga, whose greatest achievement up to that point was a device called the joyboard—a foot-operated controller that came packaged with a surfing game.

Not only was the company set up by former Atari employees, but it also obtained a loan from Atari to assist with the development of the Lorraine. It was precisely the sort of product which Atari itself should have had under development.

Atari, however, was not the only company making mistakes. Commodore followed up on the twin successes of its VIC-20 and the 64 with a pair of colossal flops—the Plus 4 and the 16. This caused dissension in Commodore, and early in 1984—at nearly the same time that Steve Jobs was triumphantly launching the Macintosh—Jack Tramiel abruptly resigned.

Commodore stock fell and suddenly its future was uncertain, especially when Tramiel resurfaced six months later and bought controlling interest in Atari. A number of key people followed him there—in addition to his three sons, there was Greg Pratt, Sig Hartmann, Elie Kenan and others. One of them, Shiraz Shivji, led the team of engineers who produced the ST computer in a miraculous six short months.

When Tramiel took up residence in Sunnyvale, he was paid a visit by Amiga Corp. They now had a working prototype of the Lorraine, but they needed more capital to bring it to market. Was Tramiel interested in acquiring it? Tramiel was, but the offer he made wasn't to their liking, so off Amiga went to Commodore.

Commodore, however, was preoccupied by the upheavals which followed Tramiel's departure, and showed no interest.

Reluctantly, Amiga returned to Atari to accept Tramiel's offer, but were stunned to learn that it was now much less than before. With the ST under development, Tramiel had no need for another 68000-based computer. Besides, Amiga still owed Atari money, and if they defaulted on the loan, Atari would pick up Amiga's assets anyway. Amiga stubbornly refused to cut its losses, and for the second time left Atari without making a deal.

At the last minute, on the same day the loan was due, Commodore roared in and snatched the Amiga from under Tramiel's nose for $25 million.

Atari and Commodore exchanged lawsuits—Commodore claiming that ex-Commodore employees who followed Tramiel to Atari had taken with them trade secrets, and Atari disputing ownership of the Amiga.

The ST debuted exactly a year after the Mac, and it was dubbed the "Jackintosh" by the press. The Amiga came out later in 1985, but the ST had stolen much of its thunder.

And like the Macintosh, Amiga sales were initially disappointing.

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So You Want to Start a User Group?

A Primer for Starting Your Own User Group, Part IV

Tim Holt (ACCEPT)

Hello, meet Uncle Sig...

Hello again! Last time out, we looked at some ways to keep your members interested and coming back for more. Hopefully, you saw that using "non-traditional" topics is a good way to keep them coming back. This time, we will look at special interest areas within your group, pros and cons of multiple platforms, and some common problems faced by user groups all over the place.

Each user group has a variety of people in them that can serve as "experts" in a particular area. Why did you buy your computer? Chances are, the guy that is vice president of your club has a very different reason, and that little kid in the back has another reason as well.

Music, games, word processing, data bases, video production, animation, et cetera all are very well served by the Atari platform. The larger your group, the greater the chances of interest fragmentation. This is where the idea of SIGs, or Special Interest Groups, comes in.

Because of time limitations, chances are you cannot cover everything you want to in your regular club meetings. But, who ever said that you were stuck to just the "official meeting" time and places?

When your club has a large enough membership, it is time to start thinking about SIGs. A SIG group can meet at the same time as the regular meeting, a sort of "meeting within a meeting." Or, you can even schedule them at different times, whenever it is convenient for those that are interested in getting together. The SIG can meet at a member's house and can be quite informal.

SIG Suggestions

Whenever there is a special interest held by a few members of your group, there can be a SIG meeting. Let me give you some examples:

Paul, Pete and Suzy all use WordPerfect at work. Well, Paul knows all the WordPerfect tricks, Suzy knows a few less, and Pete just got it slapped on the computer and he stares blindly at the screen at work.

This is a great opportunity to start a SIG. Meet at Paul's house, have a few refreshments, and enjoy going into detail on the single topic of WordPerfect. The entire club doesn't have to show up, only those that are interested in learning WordPerfect. The pace is relaxed, and attendees don't have to talk over the din of the rest of the meeting.

However, it is important that *all* members of the club are aware of this SIG meeting and that they are all welcome to attend if they choose. You don't want to start little groups within your group that feel superior to everyone else. (And we all know how those WordPerfect people feel superior to us peons...evil grin.) Always make the SIGs open to everyone.

Okay, so you have a WordPerfect SIG. Do you see how *any* program that people express an interest in can work here? Let's take another example:

Falcon is (or was) a very popular game for the ST. It is *really* neat if you hook your Falcon game up to another ST through a null modem cable. I can easily imagine a SIG for just Falcon players. They have Falcon tournaments and a Falcon Championship.

Again, everyone in the club should feel welcome to the tourney, but if they do not want to show up, fine. There are several games that allow hookup through cables, like Falcon. MIDI Maze comes to mind immediately.

Just as you can have unlimited types of demos (see last column), you can also have unlimited types of SIGs—a Mac SIG, an IBM SIG, et cetera. The limit again, is your imagination.

However, some warnings about SIGs: You do not ever want the SIGs to become more important than the club itself. If that happens, the people in the SIG will be reluctant to renew their club membership for next year. This is a reason many clubs have SIG meetings inside a club's regular meeting.

You should also make sure that SIGs are directly accountable to the club officers. You must never lose sight of the fact that SIGs are a subset of the club as a whole, and you must make sure the people running the SIGs never lose sight of that, either. If a SIG begins to view itself as outside of the club, it will eventually split off to form an individual club. This can turn into a bitter fight that leaves both factions bruised for years.

Multiple Platforms

There is a serious question for you to consider when you are starting your club—do you wish to limit it to *just* the Atari platform? There are good arguments on both

sides, and I will try to present them here. If you decide to go with multiple platforms, you have to decide which platforms to support. Just Macintosh? Just IBMs and compatibles? Both?

Let me tell you what our club has done. We sat down one afternoon and talked about the future of Atari computers. Perhaps it was after a bad week for Atari or maybe Pete's stock dipped into the $1.00 range. Whatever the reason, we decided that Atari was not going to be around in the computer arena for as long as Apple or IBM.

Maybe Atari will be around for as long as our club is in existence, maybe not. We were losing members, many of which were not quitting because they disliked the club, but because they had sold their Atari's and had bought another type of platform.

We wanted to keep members, but we are wise enough to know that folks are not as impressed with their systems as they once were. We changed then and there. Atari Computer Club of El Paso Texas (ACCEPT) became Advanced Computer Club of El Paso Texas (ACCEPT). Any type of computer platform that the Atari ST could emulate was now welcome to join our club.

Has this helped? Yes and no.

Yes, now other members are not afraid to admit that they use IBMs at work, and we now have a real Mac expert at each meeting. No, we haven't gotten many non-Atari members, but we really haven't tried.

To the minus side of this is that you do not want the Atari members, your bread and butter, to be alienated by the new group. Everyone should be equal. You do not want the famous "My computer is better than your computer" argument to rise up. In this case, and really in all cases, anybody's computer is just as good as anyone else's. Be on the lookout for these types of problems.

Problems, Problems Everywhere...

Eventually, you will run into problems. As sure as the sun rises, your club will face the following: No money, apathy, low turnouts and bad demos. Let's look at all of these.

No money—Okay, even though you have 200,000 members and each has paid their membership fee, you find that the costs of newsletters and other fees has drained the treasure chest. How do you raise money?

Well, one of the best ways our club has found was to have auctions. These work by members bringing in used original computer goods and trying to auction them off. In our club, we charge a ten percent fee to the *seller* (based on the final auction price) while the seller gets 90 percent.

You would be surprised how many people have relatively new programs and equipment that they just do not use. Suppose you sell WordPerfect at auction for $75. Well, the club would get $7.50, and you would make $67.50. Not bad, especially if the program is just

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sitting on the shelf collecting dust. I have a rule when deciding what to sell: If I haven't used it in one year, then it goes to auction!

Another nice way of getting money is to raffle off door prizes at 50 cents a ticket (or whatever price you set). You won't get a lot of money from door prizes, but it is money, and could pay for this month's issue of AIM. And they're a reason for people to come to your meetings.

You can also have special raffles, like at Christmas or the club's birthday. Raffle off a Lynx like our club did. Raffle off a Spectre GCR or even a 1040 ST if you wish! Just make sure that the prize does not cost more than the amount of money you will get in the raffle.

A membership drive is another way to get new money. Have a contest. The member that gets the most new members to join wins a prize. If each member gets one new member, you double your membership! Pretty good!

Apathy—Apathy is the scourge of all clubs. I don't know about you, but when I am asking folks to help and only one person out of 20 says boo, I get pretty upset. You can plead, you can beg, you can cry, and they still sit there and look like a bunch of stumps.

I have found the only way to get people to get off their duffs is to just *assign* someone to do something. "Bob, would you do this for me and have it done by Friday?" or "Pete, could you please scan this for me? I really need it."

Just ask. It might surprise you how many actually do what you want. Many club members are like lost sheep, and many are really pretty impressed when the President asks them to do something.

You could go the old threat route, "I won't show up until you guys get to work," but that rarely works. If you do it enough, the club realizes you are crying wolf and won't do anything for you.

Low Turnout—Small attendance at meetings is seasonal. Christmas and summer are the worst. The best way to get folks to show up is to have the best meetings at those times. Have the auctions in July and December.

Also, you can have someone in the club call all the members a couple days before each meeting, reminding them about the meeting. Please make sure, however, that you get someone reliable. The kid that plays games all day probably won't want to spend two hours on the phone calling people he doesn't know.

Don't get discouraged if the meetings don't set attendance records every time. You are going to have low turnouts...you are going to have times when everyone forgets there is a meeting! Our club meets the second Saturday of each month. When that Saturday is on the 8th, our members tend to think that is the first Saturday of the month. Once, we had two members show up at the regular meeting, but 22 showed up the next week, a week late! Get that caller calling!

Bad Demos—Sometimes, an expected demo just will not work. No matter what you do, that scanner won't scan, the hard drive won't boot, etc. Always have a "Plan B." This could be a PD program that hasn't been demoed—like ArcShell or Vanterm—or something like that.

It *will* happen, and it will be embarrassing. However, if the members see that the leaders are on top of things, they will get a warm fuzzy feeling inside and elect you president again next year!

Next time, where to turn for help, and how to keep those pirates out of the club...

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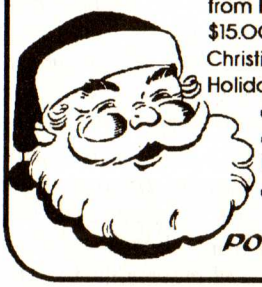

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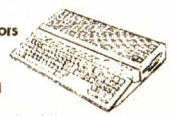

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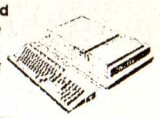

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Chronos-3D

Bill Rayl

In the heyday of CAD 3D and the Cyber series from Antic Software, animation was more a product of good programming than artistic talent. I personally never got involved with Cyber Control and CAD 3D because those packages didn't help the creative process— they got in the way of it.

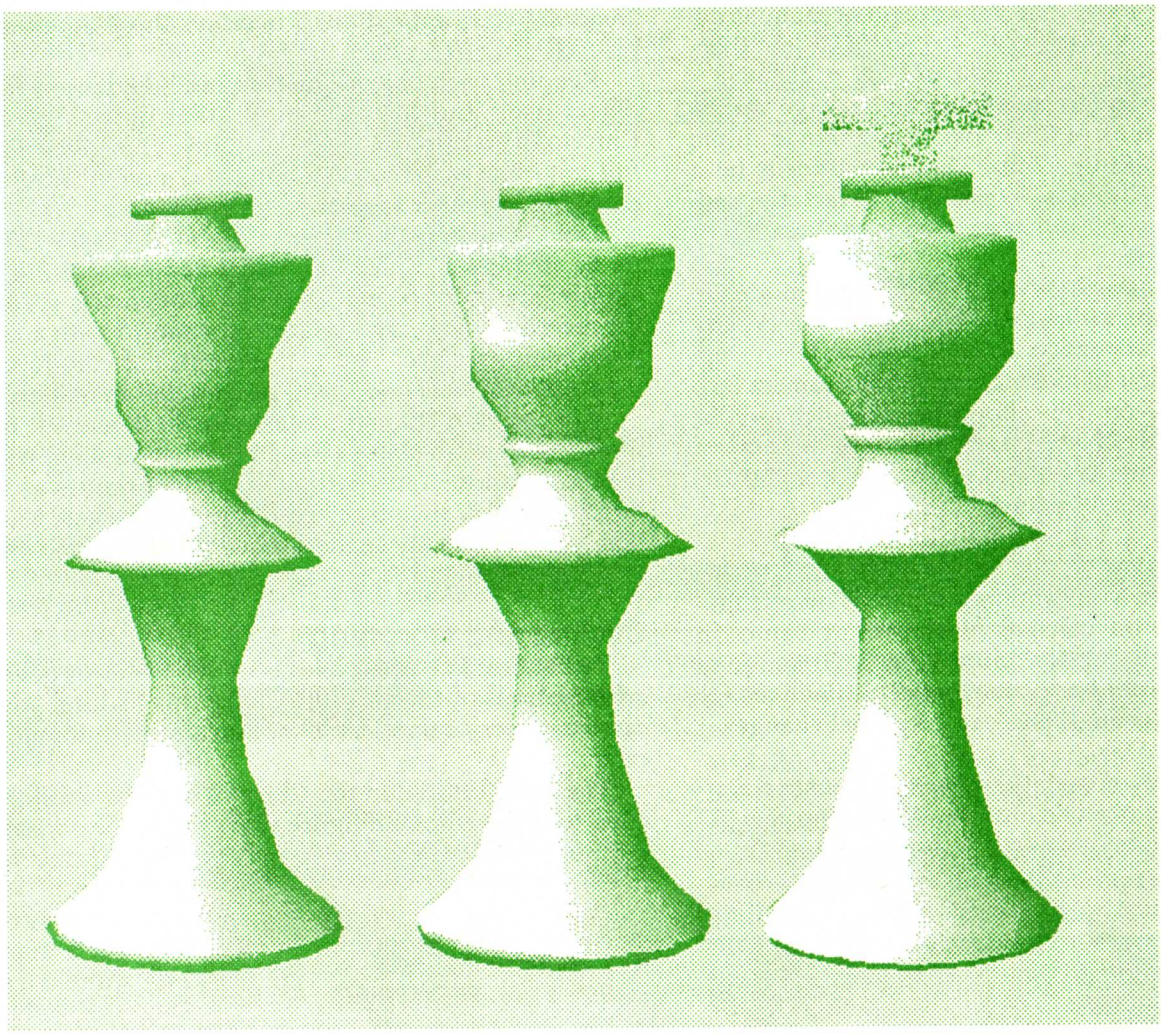
After briefly looking at what the Cyber series had to offer, I gave up on my computer animation aspirations. Now, along comes Chronos-3D from Lexicor Software. I approached Chronos-3D with a hope that it would live up to its advertised claims. It does that and much more!

Before getting the package, I felt very much like someone who has recently been in a very bad car accident deciding to get behind the wheel once again. I was not expecting a very pleasant experience. I was wrong.

What is Chronos-3D?

Chronos-3D is a "Key Frame" animation package that allows you to create animations using CAD 3D objects (created by CyberSculpt, CyberTexture, etc.) or .3D4 files translated using Lexicor's Rosetta-3D.

Anyone who has seen documentaries on the animation work done by Disney,



Don Bluth and others, has seen Key Frame Animation in action. A master animator creates "key frames" that contain the start and end points of some action. Later, an animator's assistant creates the "inbetween" frames (or "tweens" for short).

Basically, Chronos-3D and your computer function as your professional animation studio. You are the master animator and you define the start and end points for movement of the objects in your animation. You decide the number of tween frames between each set of key frames—the more tweens, the slower the motion.

As your assistant, Chronos-3D automatically creates all the tween frames. No mess, no fuss, and no programming!

Look Ma, No Programming!

The ability to create complex animations with absolutely no programming knowledge is a very big plus for Chronos-3D. Using CAD 3D and the Cyber packages, animation was not for the faint of heart. If you didn't know the proper mathematical formula, you couldn't invoke the magic.

Chronos-3D frees your creative spirit and lets you do whatever your imagination desires. You create movement by dragging objects to desired positions with the mouse. You can rotate objects around X, Y or Z axis independently or around the X and Y axis at the same time.

You can stretch, squash and otherwise shrink or enlarge an object (or multiple objects). You can slant or tilt one or more objects. And you can do all these things with a couple mouse clicks and mouse movement.

This is a package that takes the Atari ST and TT to a new level of animation...

The Main Screen

When you first boot up Chronos-3D, you are presented with the Chronos Main Screen, your little window onto the world of computer animation. A Tool Palette on the left side of the screen contains the move, rotate, scale and skew tools, as well as editing mode tools

and quick view tools. The very excellent manual details how to use all these tools, so I won't go into them here in much detail.

To help you understand how the package works, though, try to think of Chronos-3D as a movie studio and you are making a film. This metaphor is held throughout the Chronos-3D package. In fact, the ending result of a successful animation is the creation of an .FLM (film) file.

The two standard viewing (or editing) modes in Chronos are Director mode or Camera mode. At any time during the animation process, you can jump from the director's chair to looking through the camera lens by a click of an icon. This allows you to watch as your "actors" (the CAD objects) pass in front of the camera while also allowing you to take a step back as the director to "get the whole picture."

Timelines

Each object in your animation has its own "timeline." This timeline consists of a series of frames in which the object appears. Modifying the timeline of one object does not necessarily modify timelines for other objects, although you can do global changes if you wish.

You can think of each timeline as a filmstrip containing only one object's motion. When Chronos-3D "records" your animation, it overlays these timelines on each other to produce the entire "film."

Keeping each object's motion independent of the object itself and the motion of other objects gives Chronos a lot of power and flexibility. This gives you full control of each object's timing and motion without changing any other aspect of your animation.

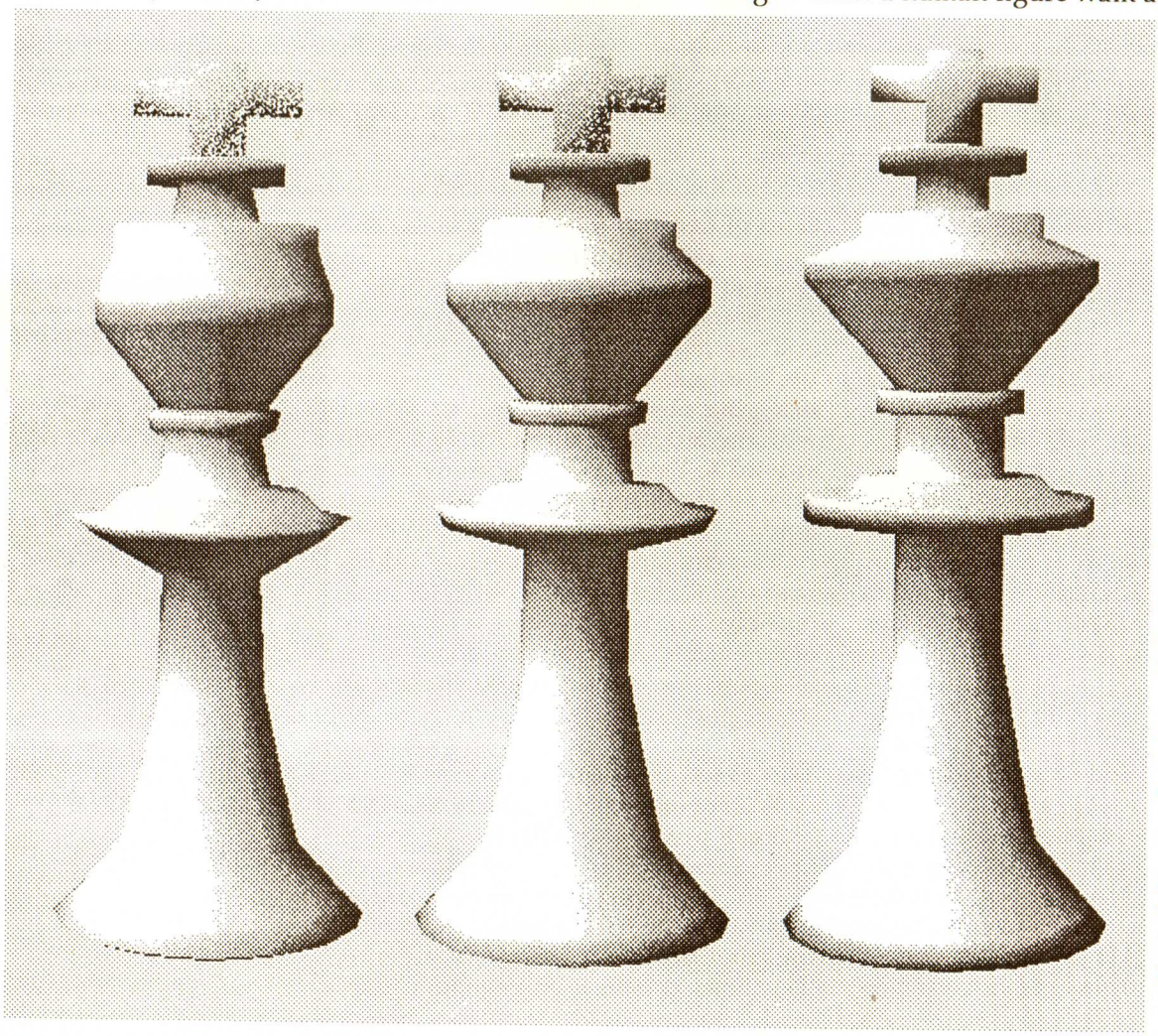
One useful benefit of this independence is the ability to create a complex animation sequence using a simple "stand-in" object. Once the sequence is ready for recording, you can replace the stand-in with a far more complex object. Using the simple object reduces the amount of time you spend creating the animation.

You can edit, cut and paste, insert or delete one or more frames in an object's timeline. When pasting, you have the option of including the original frames as is or pasting only the object's motion. Using Paste Motion, you can quickly create a sequence of motion with very little work.

Cycling and Morphing

The ability to create cycles is one of the most powerful features of Chronos-3D. Using this feature, you can create very complicated motion almost automatically.

The third tutorial in the Chronos manual uses cycling to make a human figure walk across the screen.



The figure is made up of 15 different versions of a man in various stages of walking.

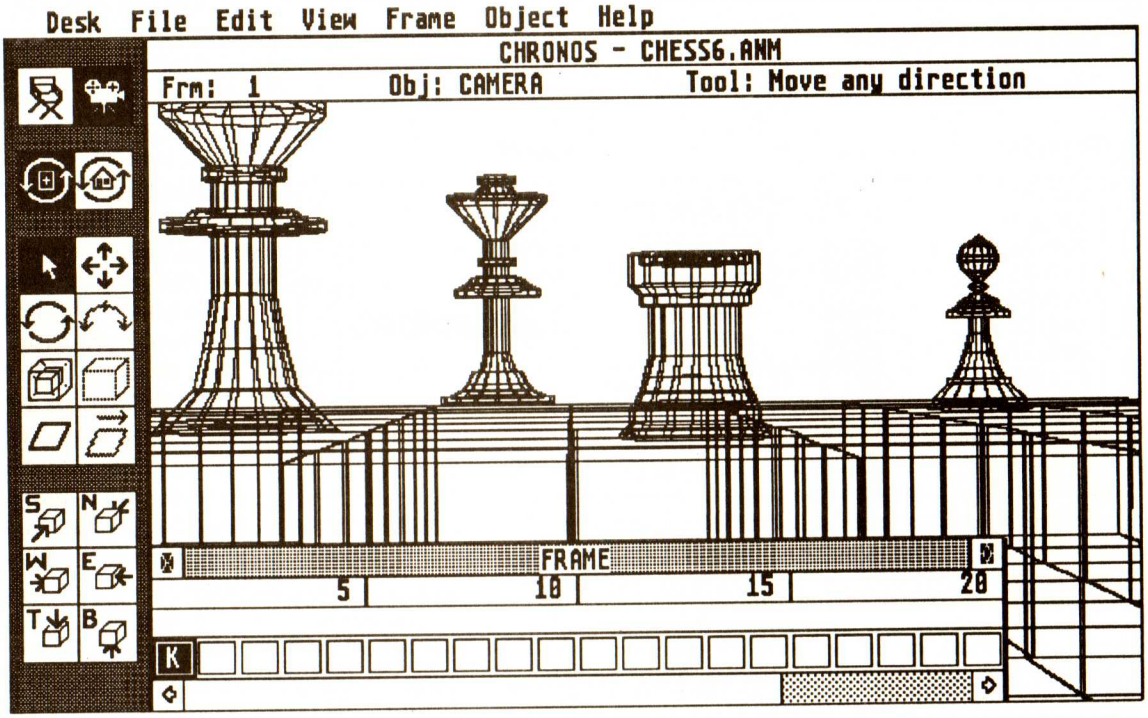
In the Cycle dialog box, you load the objects you wish to use into the Cycle list in the order in which you want them to be used. Chronos will then cycle through these objects, one per frame, until the cycle is completed, and then start the cycle again until it runs out of frames in the timeline.

You can use any objects you wish in a cycle. The objects do not have to be

modified versions of the same object, as in the case of the walking tutorial.

As if this was not a powerful enough feature already, Chronos-3D can also add a Morph (short for metamorphosis) process to a cycle.

What this feature does is allow you to change one object into another before your eyes. In order for a morph to work, the two objects used must have the same number of points and faces.



To create a morph, you simply add the first object to the cycle list, click on Add Morph as many times as you want tween frames, then add the second object to the list.

As an example, I've taken two chess pieces and morphed the queen into the king in a total of nine frames to show how the process works. All I did was supply the two objects and Chronos-3D did all the work. The resultant morph cycle is shown in the three pictures on pages 16-19.

You cannot simply choose any two objects for a morph. You will need a program such as CyberSculpt to create objects that will work.

Tracking

One of my favorite features of Chronos-3D is its tracking abilities. You can automatically set the camera to track an object over selected frames, set a spotlight to track an object, and even have other objects track an object.

Setting the camera to automatically track a moving object is a very powerful tool that allows you to create sweeping action easily. You can, for instance, follow a human figure as it walks down a street or a spaceship as it dodges through a meteor storm. And all without ever touching the camera.

Lights...

Chronos-3D gives you a choice of five different types of lighting. Global Illumination supplies an even amount of fill lighting to the entire Chronos universe. Global Illumination is independent of any light source.

Point Source lights give lighting equivalent to an unshielded light bulb, emitting light in all directions with decreasing intensity the further you get from the source. Solar lighting imitates the outdoor lighting supplied by the sun.

Using Ambient lighting creates a diffused light source similar to Global Illumination, but with the ability to vary the intensity from frame to frame. The final light source is the Spot Light for creating focused beams of light similar to stage lighting.

The types of lighting in Chronos-3D are compatible with light source standards from the popular RenderMan package from Pixar.

Camera...

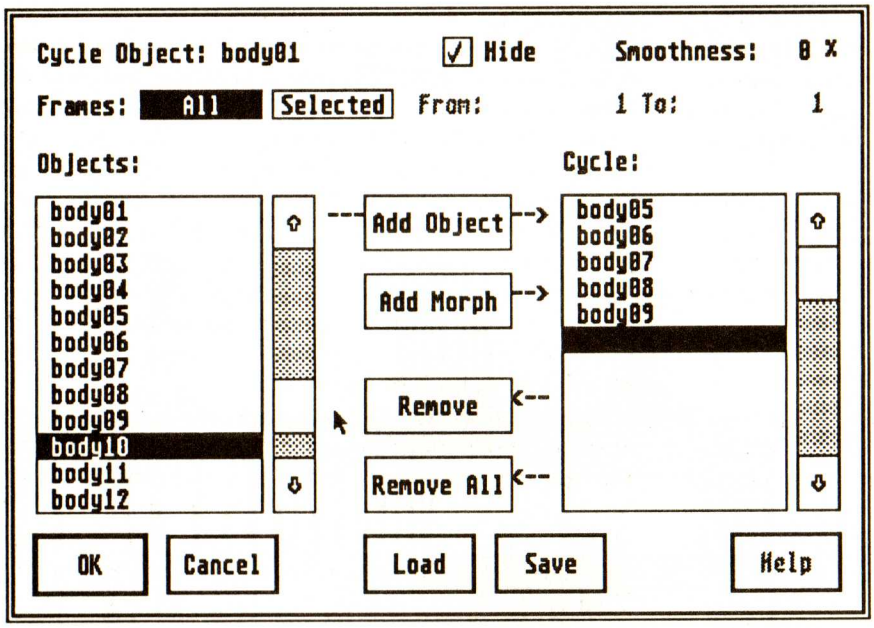
The camera in Chronos-3D is basically treated just like any other CAD object. You can select it, rotate it and move it from the Director mode. The camera has its own timeline, so you can have different camera angles and settings for different frames of your animation. Chronos-3D will even create tween frames for camera movement.

Once you have set your camera on a given spot, you can save the current camera position and view by setting a Tripod. Up to eight different Tripods can be set, and you can automatically move the camera from one to another.

Both the Camera and Director views can be modified in the View Window. This window gives you access to a number of settings, including Perspective, Zoom, Horizontal and Vertical rotation and Bank. Changing the Bank setting, for instance, lets you add a Hitchcockean flavor to your animation by tilting the camera angle.

Rotations

Using the Rotate About Home setting in conjunction with the Set Home command lets you move the



camera around a defined center point. The default is the center of the Chronos universe. You can, for example, define this point as the place upon which an object appears. Then, you can use the camera to film while moving around this object.

The Rotate About Self setting in the View Window keeps the camera (or director) locked into the current spot, allowing the view to pivot around that position.

Using the About Home icon in the Tool Palette, you can make all objects rotate about a selected point—planets, for instance. I find it personally satisfying to create a universe in which the Earth is the center and everything else rotates around it. Take that, Copernicus!

The About Center icon can be used to rotate an object around their own center point. So, now you can make the Earth rotate around its center while the universe rotates around the Earth. Both the About Home and About Center icons are used in conjuction with the Motion tools in the Tool Palette.

Fading Away

Another neat feature is the ability to set Visibility for an object or a group of objects. Using this capability, you can easily make objects fade from view, appear and disappear instantly or create Star Trek-like transporter effects ("Beam me up, Scotty!").

This Visibility feature is simply great for creating images of an object in water, a reflection in a mirror or a view of an object as seen through a fog or cloud. Using Visibility in conjuction with a Morph can give you some pretty spectacular effects. The possibilities are almost endless.

Object Appearance

You also have a good deal of control over how the objects in your animation will be shaded, dithered, etc. The Object Appearance dialog allows you to select one of three shading methods—Flat, Gouraud and Phong.

Flat shading is, by far, the fastest shading method, but it is also the least impressive or realistic in its results. Each face of the object is shaded individually. Gouraud shading is far more impressive, as it takes into account the light sources being used and the end points of each face to determine how to shade each face.

Phong shading does a pixel-by-pixel shading of the object and is particularly useful when dealing with curved or rounded objects under a spot or point light source. Phong shading does take considerably more time to render, especially with complex objects, but the results are quite impressive.

A Smooth Faces option is also available when using either Gouraud or Phong shading. Turning Smooth Faces on causes a perfect blending of all faces, particularly useful for spheres and other rounded objects.

Finally, you can set Fixed or Random dithering, or no dithering at all. Choosing None tells Chronos to use only solid colors when rendering. Fixed dithering sets the same dither pattern to be used for a selected object throughout the entire animation and is most useful for stationary objects. When dealing with objects in motion, Random dithering is the preferred method. This tells Chronos to recalculate a new dithering pattern for each frame.

Rendering

When you've finally completed the design of your animation and it's time to record the "film," Chronos-3D offers a multitude of rendering options. Chronos currently supports all ST and TT resolutions and the ISAC board designed by Jay Craswell in 1024x768 or 800x600 resolutions with 16 colors.

You can render as a Wire Frame animation with rendering of all edges or only those edges that are visible. Solid rendering lets you select Faces or Faces & Edges. Using Faces, the individual parts of the object are blended smoothly together, while Faces & Edges retains the indivuality of the parts and gives a more angular appearance to the objects.

At the time of rendering, you can also choose from a number of overall shading options and whether to use an actual color palette or gray scale mode (or no palette). You can record the animation from the camera's point of view in each frame or from the currently selected view in the main screen. You also have the option of rendering your creation in Draft or Final mode, as well as saving the resultant file in .FLM format or Antic's .DLT format.

At the bottom right of the Record dialog, you have

a number of options and check boxes from which you can select. These options allow you to include the lights, camera and grid in the recorded animation (normally, they disappear in the final product). You can also toggle between a white or black background for your animation.

At the very top of the dialog box, you can choose which frames appear in your animation. For instance, you can decide to record only frames 10 to 80 of a 100 frame animation *and* only record every other frame or every third frame, etc.

Manual

With any powerful software package, you need a very thorough and well organized manual. With Chronos-3D, you get it! The 11 chapters of the manual take you step-by-step through the entire program, with detailed tutorials and reference sections you'll turn to again and again.

The eight page Table of Contents and 11 page Index have never failed me yet. Whenever I needed to find some piece of information, the Index pointed the way and the manual contained exactly what I was looking for.

If you're a new user to the ST, the manual has sections detailing how to use your computer, the mouse, etc. If you're new to animation, there is some fairly good discussion of key frame animation principals in the first chapter. Chapter 10, "Putting It All Together," has a number of useful tips on speeding up the design of your animation, using CAD objects, creating motion and lots more.

For the new animator, there is even a Glossary of terms in the back of the manual with definitions of animation, computer and Chronos jargon.

The manual comes with a hard plastic 3-ring D binder that's built to take a lot of use. A serial protection dongle also comes with the package. That's right, Chronos-3D is copy protected. The dongle plugs into the serial port (you need a 9-pin to 25-pin adapter if using a TT or Mega/STE) and has a pass-through. You can then plug your modem into the dongle and forget about the whole thing. A parallel port version of the dongle is also available.

Conclusions

I've tried to touch on most of the major features that Chronos-3D has to offer. This is a package that takes the Atari ST and TT to a new level of animation capability while still allowing CAD 3D and Cyber series users to take a lot of their past work with them.

As part of an overall "Phase-4" package from Lexicor, Chronos-3D offers Atari users all the power and flexibility that owners of other computer brands are just now getting as well. Its ease of use and ability to create animations with no programming opens the world of computer animation to many people who otherwise couldn't be involved.

I wholeheartedly recommend this package to anyone who is interested in computer animation, from the professional animator to the novice animator who has never used a computer to create animations. At about 1/2 to 1/4 the cost of comparable animation packages on the IBM, Macintosh and Amiga, Chronos-3D puts the Atari back on the animation map.

Chronos-3D $249.95
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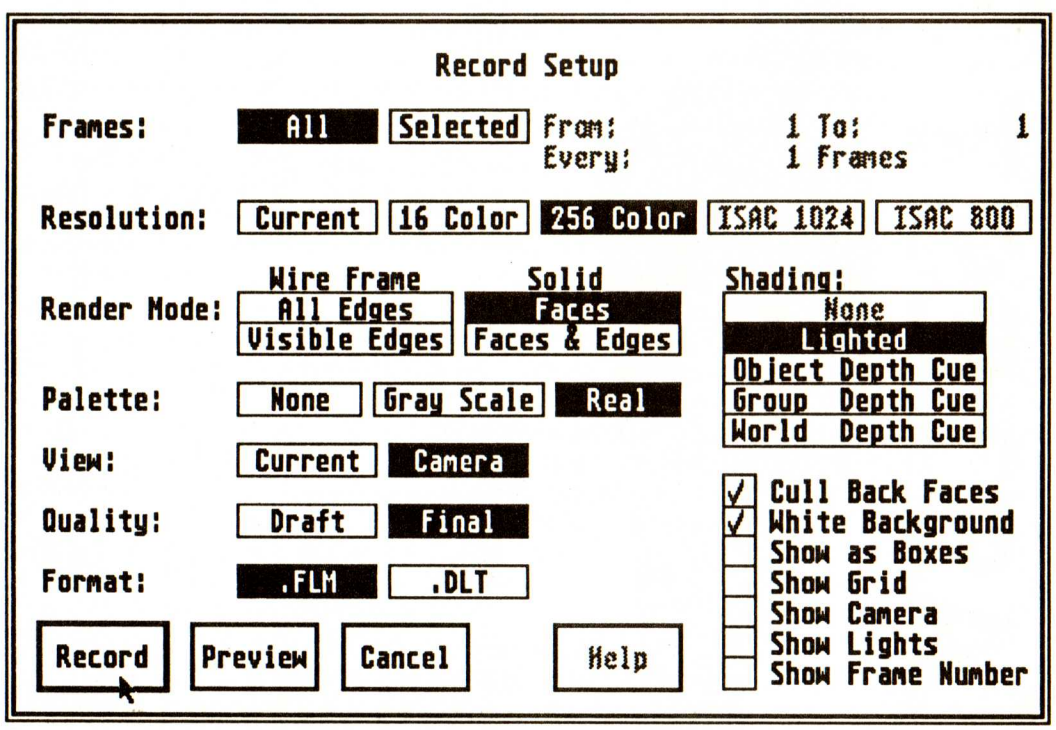

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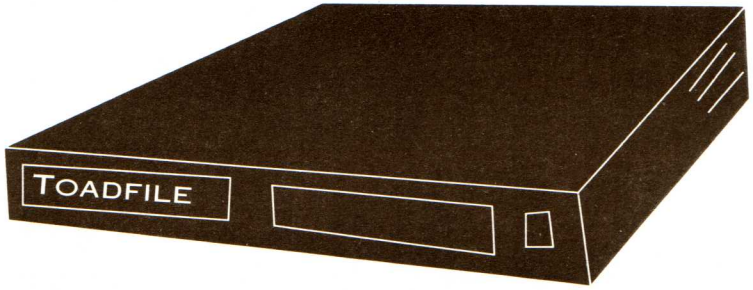

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C or Assembly— Is There a Choice?

Robert C. Arp, Jr.

I don't always mean what I say. Or is it that I don't always say what I mean? Anyhow, in response to the question "C or assembly—which should I use?" I most often snap back "Assembly!" Actually, that's not what I mean.

What I Really Mean Is...

Until recently, the most definitive reference books used Pascal to illustrate algorithmic implementation. Inasmuch as Pascal was designed specifically for that purpose, there could not be much opposition to the practice.

After C became the language of choice for both programmers and students—and since C has all of the advantages of Pascal but none of the disadvantages—the most acceptable references were rewritten using C as the implementation language.

There are still many acceptable references which use Pascal as the illustrative language; however, since most acceptable references are currently using C, it seems reasonable to assert that learning C is now a prerequisite to learning to program.

Therefore, focusing attention of the topic on those who are involved in the serious (as contrasted to recreational) study of programming, I say, "There is a choice. But the choice is not whether to C or to assembly."

What I really mean is that assembly is the language of preference after one has acquired a solid background in C. The only choice is which to study first. Of course, I don't imply that it is possible to ever *actually conclude* the study of either language.

C Is Important Because...

Algorithmic design and implementation are discussed using higher level language examples because, if the sophistication of the language exceeds the sophistication of the algorithm, the complexity of the discussion is reduced.

For example, only the most comprehensive assembly language books discuss data structures; and even when they do so, implementation via Pascal or C usually precedes any implementation in assembly.

That's one of the reasons C is such a popular language. The sophistication of the language reduces the discussion of complex algorithmic design and implementation to trivia in many cases. In other cases, it at least reduces complexity to tractability.

One of the more powerful features of Atari computers is the graphic mouse/keyboard user interface. Programs designed to utilize that interface rely heavily on the use of complex structures. C facilitates the design of those programs because C reduces the complexity of the structures.

Unfortunately, C often extracts a heavy price in exchange for its sophistication. That price is paid in performance during program execution.

Assembly Is Important Because...

What C taketh, assembly returneth—and then some. In a way, assembly is much more efficient on Atari computers than it should be. If the designers of the operating system had written the OS in assembly, execution performance would be at least tolerable for programs written in C. Assembly could then be reserved for those programs requiring spectacular execution speed.

But because they did not, assembly language programs are required to recover much of the power squandered by those designers. Fortunately, 68000 assembly is sophisticated enough that conversion of C-designed complex data structures to assembly does not require excessive effort.

For Example...

In Chapter 4 of his COMPUTE! Atari ST AES book, Sheldon Leemon discusses GEM graphics objects. In the first sentence of that chapter, he asserts that the concept of GEM graphics objects is the key to the GEM interface. Here, the object is simply a label applied to a declared structure.

Leemon closes his first paragraph in that chapter with an assertion that GEM objects are the basic building blocks for all of the sophisticated GEM visual constructs, such as dialog boxes and menus. He then presents the structure which I repeat below for illustrative purposes in this article.

```
typedef struct object
{
        int   ob_next;   /* object # of next "sibling" */
        int   ob_head;   /* object # of first "child" */
        int   ob_tail;   /* object # of last "child" */
        unsigned int  ob_type;   /* object type: BOX, CHAR,... */
        unsigned int  ob_flags;  /* flags for color, fill pattern...*/
        unsigned int  ob_state;  /* flags for how to draw - SELECTED,
                          CROSSED, etc. */
        char  *ob_spec;  /* pointer to object-specific info */
        int   ob_x;  /* left edge of object */
        int   ob_y;  /* top edge of object */
        int   ob_width;  /* object width */
        int   ob_height;  /* object height */
} OBJECT;
```

Leemon then discusses the concept of a binary tree structure and each member of the above structure in detail. As part of his discussion, he uses an example GEM dialog box to illustrate the role of the first three members of the structure. Leemon presents a tree walking algorithm using the structure of the dialog box to illustrate algorithmic design. Herein, I will present an assembly language implementation of that tree walking algorithm.

If you do not have a copy of Leemon's AES book, I suggest you obtain one as soon as possible. For sure, the book will facilitate your understanding of the algorithm I am to present. Beyond that, however, Leemon's books are essential references for any Atari computer programmer.

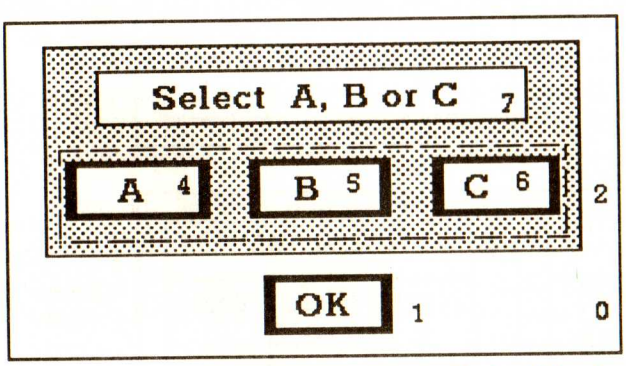

Figure 1–Sample Dialog Box with Eight Objects
(Object 3 is invisible in the actual dialog box and is indicated here by the dotted line rectangle)

The Dialog Box

My example dialog box is shown in Figure 1. This box is very similar to that used by Leemon. I forced the object number of each component to match that of Leemon's, even though I would not normally design the box that way. The box with the dotted outline is object #3, the invisible box—that is, pretend you don't see the dotted lines. Other than the invisible box, the number of each object is shown within the object or directly adjacent to the object's right edge.

The GEM interface has been designed to encourage programmers to maintain GEM object data files—.RSC files, or resources—apart from executable files. Many programmers and users, however, find the two-file arrangement to be cumbersome. Therefore, the current trend is to include all object data within the executable program.

Several programs have appeared in the public domain which convert the output of resource construction sets to language specific data files that can easily be included within a program's source file. I have converted the resource construction set's output for the dialog box shown in figure 1 to the data file shown below.

```
rsc:

tree0:
obj0_0:  dc.w -1,1,2,20,32,16,$0002,$1100,$0,$0,$001D,$000B
obj0_1:  dc.w 2,-1,-1,26,7,0
         dc.l str0
         dc.w $000C,$0009,$0005,$0001
obj0_2:  dc.w 0,3,7,20,0,0,$00FF,$1111,$0002,$0001,$0019,$0007
obj0_3:  dc.w 7,4,6,20,0,0,$00FF,$1100,$0001,$0003,$0017,$0003
obj0_4:  dc.w 5,-1,-1,26,1,0
         dc.l str1
         dc.w $0002,$0001,$0005,$0001
obj0_5:  dc.w 6,-1,-1,26,1,0
         dc.l str2
         dc.w $0009,$0001,$0005,$0001
obj0_6:  dc.w 3,-1,-1,26,1,0
         dc.l str3
         dc.w $0010,$0001,$0005,$0001
obj0_7:  dc.w 2,-1,-1,22,32,0
         dc.l ted0
         dc.w $0004,$0001,$0012,$0001

ted0:    dc.l str4,0,0
         dc.w 3,6,2,$1180,0,-1,19,1

str0:    dc.b "OK",0
str1:    dc.b "A",0
str2:    dc.b "B",0
str3:    dc.b "C",0
str4:    dc.b " Select A, B or C ",0

rscend:
```

The configuration of the object data file can be directly compared to that of the C struct declaration to verify that the declared members of each assembly object matches those of the C object structure. There are eight object structures in the assembly language file. Note that these eight structures form an array of struc-

tures and that each element in the array can be referenced from the labels tree0 and obj0_0. The element offset is 24 bytes.

Figure 2 is a pictorial diagram of the information contained in the first three members of each of the objects in the resource data file. Each object is identified in the pictorial by its object number. Arrows indicate the linkage between object structures. Leemon uses a double arrow structure to indicate two- way linkage between objects; I use separate arrows to indicate the same type of linkage.

Identifying the box containing the object number as an internal node and the smaller boxes containing the linkage information as links, I can use terminology commonly found in references to compare the tree shown in Figure 1 to a binary tree, which has two links below each internal node. Because GEM object trees have three links, the term binary seems not to apply.

Correlating the GEM links to those found in references for binary trees, we can match the Next link to that called a sibling (a right link in some references) and the Head link to that called a child (a left link in some references). The third link, Tail, has no correlation in any reference text I have seen, although the existence of such is implied in Robert Sedgewick's second edition of Algorithms.

There, Sedgewick indicates that a third link would provide a way to move up a tree, thereby overcoming the down only limitation imposed by the two-link binary tree representation. Note that he tends to apply the label binary to all trees, regardless of link quantity.

Indeed, as shall be seen shortly, that third link does permit movement up the tree. For further detail concerning the pictorial, I refer you to Leemon's book. Furthermore, I refer you there for his algorithmic procedure, listed as a series of steps one through four.

If you compare his procedure to my assembly language implementation of the tree walk algorithm, you will note several differences. For example, in his first step, Leemon proposes an "inorder" traversal of the tree. My implementation is that of a "preorder" traversal. In addition, my implementation presupposes the existence of one or more trees in the resource data file.

To illustrate the assembly language algorithm, I select as its raison d'être the conversion of each object's location and size fields from the character-based coordinate system used in resource files to the absolute pixel system required by the executable program. This is one of the first tasks that must be accomplished when including a resource data file in the executable file.

The Assembly Language Implementation

The tree walk algorithm is prepared in the form of a subroutine which would be called early within a program, certainly before any activity requiring that any of the GEM object trees be drawn. Within the program's data section, situated before the resource file declarations, an array of pointers to all object trees would be declared. This array would be null terminated and would appear as that shown below.

```
tree_pointer_array:
        dc.l tree0,tree1,...,treen,0
```

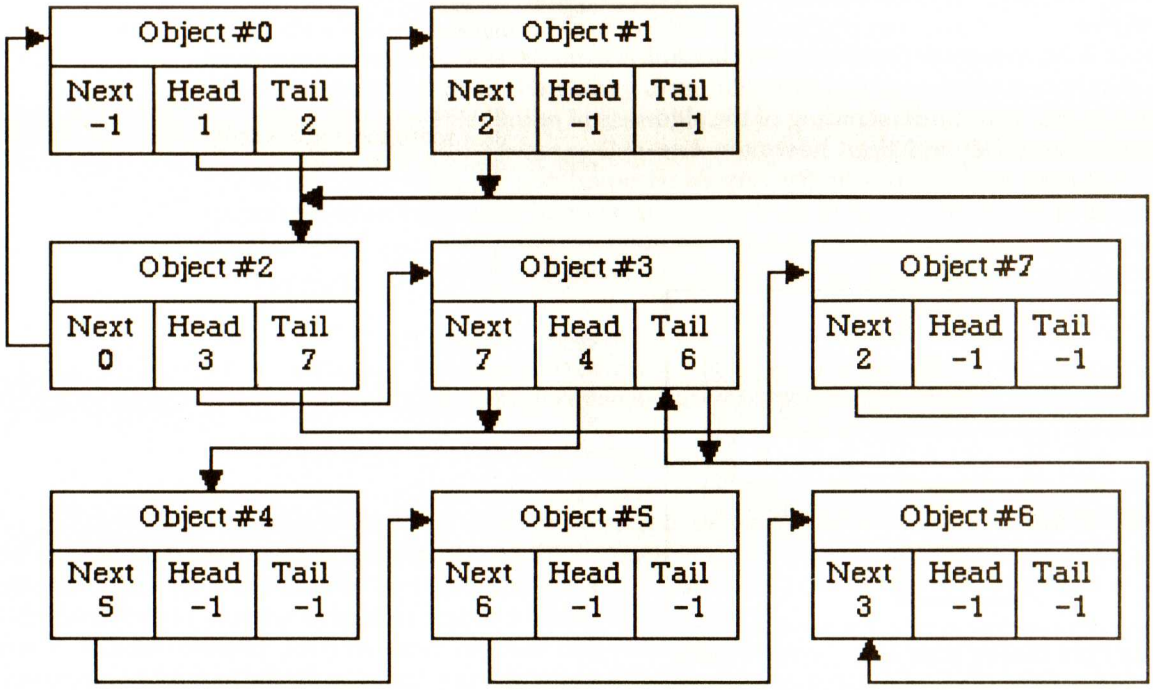

Figure 2–Object Linkage for the Tree Shown in Figure 1

```
change_tree_coordinates:
 ; Point to the GUI's object tree pointer array and step through it to
 ; fetch each tree's address. Walk each tree and change each object's
 ; character coordinates to pixel coordinates.

 ; Algorithm History:
 ;     Resource construction programs construct objects so that they are
 ; aligned according to character positions. GUI programs require objects
 ; that are aligned according to pixel coordinates. The rsrc_obfix aes
 ; function converts the character positions to pixel coordinates.

 ;     The tree walking algorithm was developed using the example on page
 ; 100 of COMPUTE!'s AES book (by Sheldon Leemon).

 ;     The algorithm was designed and tested in the program TREEWALK.

 move.l     #rsrc_obfix, aes_pb      ; COMPUTE's AES page 303.
 lea        tree_pointer_array, a3
 moveq      #-1, d5                  ; Tree number up counter.
walk_tree_outer_loop:
 move.l     (a3)+, a4                ; Fetch address of tree.
 move.l     a4, a5                   ; Need another copy.
 move.l     a4, addr_in              ; Address of tree being processed.
 addq.l     #1, d5                   ; Increment tree counter.
 moveq      #0, d7                   ; Object number register.

walk_tree:
 ;      The process being performed for each object is the conversion of
 ; its coordinate parameters from character based to pixel based.

 ; Current object number is in D7. Current object address is in A5.

 move.w     d7, int_in               ; Visit the node.
 bsr        aes                      ; Convert object's coordinates.

 ; Look for child object.
 move.w     2(a5), d4           ; Fetch ob_head. ob_head is an object #.
 bmi.s      examine_ob_next     ; Branch if -1.

 ; Each object is 24 bytes long. D4 contains the number of an object
 ; within the tree being processed. The object number in D4 is an offset
 ; into the tree that is, by definition, the difference between the object
 ; number in D4 and the tree's root object number = 0. That is, in an
 ; array of structures, the root tree structure is element 0 of the array
 ; and the object number in D4 is the element number of the structure
 ; identified by the number in D4.

 ; The structure array element number in D4 must be converted to the
 ; number of bytes between the root object's address and the address of
 ; the object in D4.

 ; Remember that A4 => tree's root object; the address of the object number
 ; in D4 is calculated by multiplying D4 by 24 bytes/object and by adding
 ; the result to the address in A4.

 ; The child will now become the current object; the parent will be the
 ; previous object.

 move.w     d4, d7              ; Make child the current object.
 mulu       #24, d4             ; Convert to offset into the tree.
 lea        0(a4,d4.l), a5      ; Fetch address of the child object.
 bra        walk_tree

examine_ob_next:
 ; Look for sibling or parent. Remember that A5 => current object.
```

```
move.w      (a5), d4            ; Fetch ob_next of current object.
bmi.s       exit_inner_loop     ; If -1, the entire tree has been processed.
move.w      d7, d3              ; Need a copy of current object.
move.w      d4, d7              ; Make ob_next the current object.
mulu        #24, d4             ; Convert to offset into the tree.
lea         0(a4,d4.l), a5      ; Fetch address of new current object.
move.w      4(a5), d4           ; Fetch ob_tail of new current object.

; Compare the object number in D3, which is the object number of the
; previous object, to the number in D4, which is the ob_tail field of the
; new current object.

; If D3 = D4, then new object is the parent of the previous object.
; If D3 not = D4, then new object is a sibling to the previous object.
; In either case, the object in D7 has become the new current object.
; Only the branch back point depends on the comparison.

cmp.w       d3, d4
beq.s       examine_ob_next     ; Object is parent of previous.
bra         walk_tree           ; Object is sibling of previous.

exit_inner_loop:
; When A3 is pointing to zero, all trees have been processed. That's
; true because I have stored a zero as the last pointer in the array of
; tree pointers.

tst.l       (a3)
bne         walk_tree_outer_loop
rts
```

Other Declarations

The success of the tree walk algorithm depends on the presence of several other declarations. I am inclined to assume that anyone who understands the algorithm understands where and how to place those declarations. However, in case one or two readers may be momentarily disorientated, I'll list those below.

```
;
; AES AND VDI STRUCTURES AND ARRAYS
;
aes_pb:             dc.l  control,global,int_in,int_out,addr_in,addr_out
vdi_pb:             dc.l  control,int_in,pts_in,int_out,pts_out

; PREDEFINED 'CONTROL' STRUCTURES
rsrc_obfix:
dc.w 114
dc.w   1
dc.w   1
dc.w   1
dc.w   0
```

Conclusion

We can feel righteous dismay because the operating system used in Atari computers was written in C instead of assembly. If the system had been written in assembly, C would probably be the appropriate language for most applications. Instead, only programs written in assembly have a chance of recovering execution speed squandered within the operating system design.

Fortunately, the assembly language used in Atari computers is sophisticated enough to facilitate the translation of complex data structures from higher level languages to assembly. Using assembly language and bypassing the operating system whenever it is convenient to do so, we gain more than was lost.

A solid background in C is a prerequisite to the study of the complex data structures that are the foundation of the GEM interface. But with experience in assembly language algorithm implementation, we can eventually eliminate the intermediate translation stage of program development. As an example, I have presented this assembly language implementation of Leemon's tree walk algorithm.

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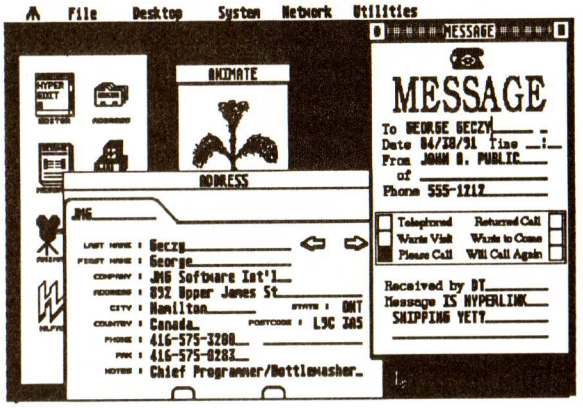

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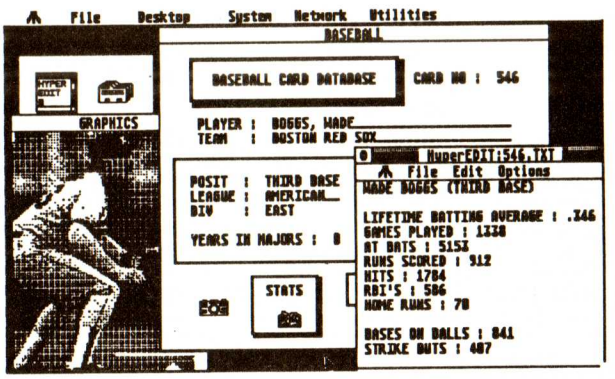

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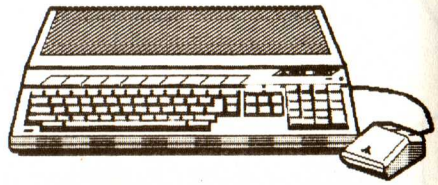

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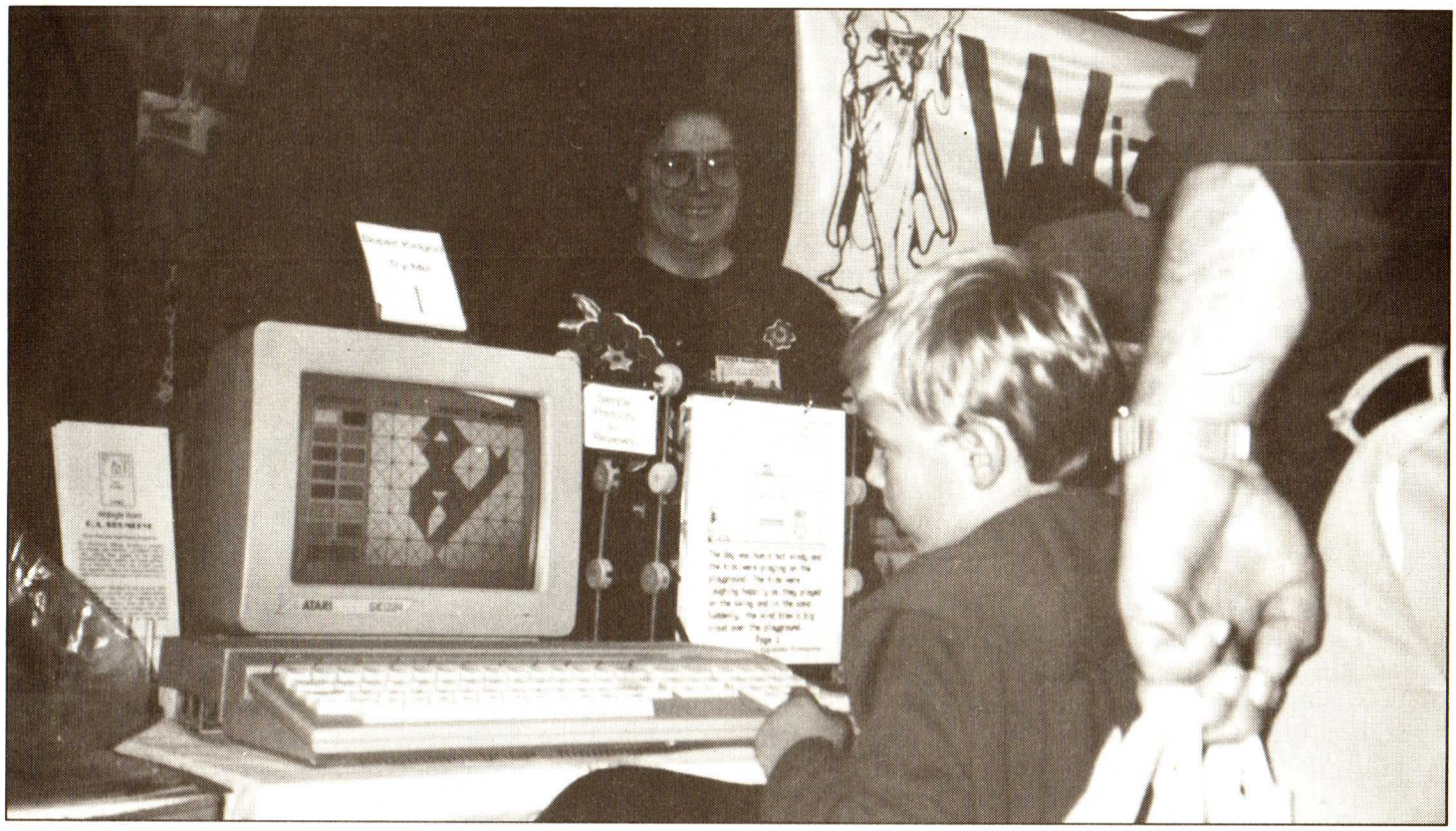

Above: Dorothy Brumleve showing off her Super KidGrid to avid users.

WAACE '91 Show Report

(and a little more!)

Below: The amazing features of CodeHead's Avant Vector

Patricia Snyder-Rayl

I have to apologize up front because I'm not able to go into a lot of detail about the various products shown at the recent WAACE show. I was stuck at our own booth selling stuff like hotcakes most of the time, so I wasn't able to get a good look around at what other vendors were selling. That's good news for AIM, but bad news for our readers! I do have a lot of quotes from vendors to share about the show, however.

The show was a rousing success, following shortly on the heels of the successful Glendale show a month earlier in California. The total count for both days rested at about 2,300 people through the door.

Unusual for the WAACE show, though, many of these people came from very long distances away. I saw people from Florida, North Carolina, Michigan, New York and other states I can't think of now. Even with the number of people through the door being a little bit more than attended WAACE last year, the people who came were definately buying more product than at last shows!

A Little History

The WAACE show is an annual event held in the Washington DC area, sponsored by a collection of Virginia and Maryland clubs under the umbrella organization WAACE (Washington Area Atari Computer Enthusiasts). The show started out as a free public event in Fairfax High School designed to educate people about computers in general and Atari computers specifically. The event grew so large in popularity and size that the high school and WAACE show committee agreed to move the show to a more commercial setting—the Reston Sheraton to be precise.

Three Companies and a Booth

The last time we attended WAACE's show was two years ago—the last year it was held in the high school. We heard great reports about last year's show, but weren't able to go ourselves. This year, we were able to attend through a combination of early registration discounts and judicious booth sharing.

We actually had three different companies sharing our AIM booth! We had Unicorn Publications, of course, but we also represented CompuServe's Atari Forums for Ron Luks and Branch Always Software for Darek Mihocka.

Handing out CompuServe signup kits was no problem, and I was used to selling magazines and Disks of the Month, but I was totally unprepared for the deluge of people wanting to upgrade from Quick ST II to Quick ST 3! It really makes you want to sell software packages when you see all these show-goers eager to throw their hard-earned money at you. Darek did very well at the show, selling out of all the copies of Quick ST 3 he gave us. We did very well too, signing up more subscribers than at any past show and selling more magazines and disks too!

Ours weren't the only happy faces! Joppa Computers, an Atari dealer and mail-order firm with a large

Atari Explorer's John Jainschigg and Maura Fitzgerald

display at the show, sold out of all the 24 STEs they brought! Here's what some of the vendors had to say:

Vendors Speak

Nathan Potechin of ISD Marketing, Inc in a report on Saturday, "The show is going real well. Attendence is great, enthusiasm is high. ISD has its first booth ever. Mario, Shawn and Julius are strutting their stuph :-) while I kibitz. :-) In fact, here I am typing away in GEnie's booth. Darlah had disks made containing the latest ST Aladdin, ARC and LZH Utilities, GEnie Lamp, etc. She has been making them available to all comers for $1 and they are going real fast. :-) No surprise." *[Ed: Unfortunatly, the GEnie disks were infected with the Key virus. Be sure to use VKiller on the disk if you picked one up at the WAACE show.]*

"While indeed Sunday was markedly slower than Saturday, we nevertheless enjoyed the show very much," said Atari's Bob Brodie. "This type of slower pace allows for more quality time to be shared with the attendees. And the Sheraton has a number of very nice areas where one can sit and enjoy a quiet conversation...without the whole world watching!

"Not having a booth, or a speaking slot on Sunday, I opted for a more casual approach to the show and went in wearing jeans (yes, blue ones!) and my GEnie T-Shirt. I managed to escape notice *a little* bit more, but lots of people still came up to say hi. I also got a chance to do some honest shopping...picked up a cartoon disk from the Wiz Works guys, an update to Tracker 3.0, and got some extensive demos on exciting products. Then it was off to the productivity room for a demo of 3D sculptured surface modeling with ChromaCad—running on a 130XE. *Very* impressive!"

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PRESIDENTIAL PONDERINGS

In these times of high costs, no one likes to hear of price increases. Unfortunately, that is what I now must address. A recent review of our costs to produce and mail our monthly (FR)ANTIC newsletter and pay the additional postage for foreign mailing of the Atari Interface Magazine (AIM) revealed the necessity to raise our dues for Subscribing members. We regret this, but, while we are a "not for profit" organization, we cannot afford to pay out more than we receive and long remain a viable user group. Current Subscriber memberships will not be affected until the date of renewal. We trust current and prospective Subscribing members will understand our difficult decision.

Because of the significant increases in dues including AIM for our foreign Subscribing members, we are offering these members the option of subscribing without AIM. Domestic subscribers have only one category of membership; i.e. including AIM. Please note that delivery of AIM is contingent upon Unicorn Publication's production schedule and a significant change (increase or decrease) in our mailing costs could result in an adjustment to Subscriber dues in the future.

Once again, I am sorry that these new rates are necessary. Foreign subscribers should examine other options that they may have to get AIM. Our feelings will not be hurt. Our offer is a service to Atarians throughout the world; if you know of a better way, by all means choose that way.

The GOOD NEWS is that we have AIM and their public domain disks. For this we can be thankful. Each of us should remember to thank Pattie and Bill Rayl whenever we get the chance. Until next month, enjoy your fabulous computer and think Atari.

Atari Computer Club of Toledo members receive, as part of their dues, Atari Interface magazine and access to the 8bit and ST public domain software libraries. Disks are $2/8bit and $4/ST. Non-members may purchase disks at a slightly higher rate.

ACCT serves Atari users in the greater Toledo area and the sole purpose of the club and its resources is to promote the continued use and in-depth understanding of the Atari family of computers in the home and office environments.

ACCT meets on the first Wednesday of each month, from 7-9 PM at the home of Dave and Brenda Micka. ST and 8bit SIGS are held immediatly following the business portion of the meetings.

ACCT may be contacted at 4487-289th Street, Toledo, Ohio 43611 or by phoning Dave Micka at (419) 729-1891 or Michael Justice at (419) 242-7797.

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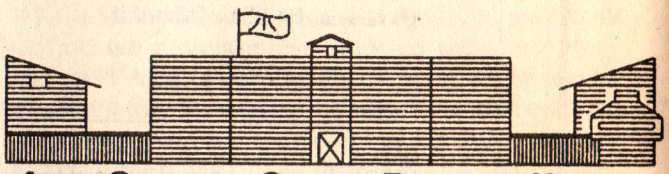

ATARI COMPUTER OWNERS RESOURCE NETWORK
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ACORN is the Fort Wayne, Indiana Atari users group and supports the full line of Atari computers. We meet on the first Saturday of each month from 10 AM to 1 PM at the Shawnee Branch of the Allen County Public Library. For more information call our BBS at (219)744-1396 (9600 baud) or contact Ken Helms, 3627 Iowa Court, Fort Wayne, IN 46815.

Notes from the October Meeting:

The October meeting was our joint meeting with the local IEEE chapter and was held in the Magnavox Board Room in Industrial Park. Attendance was quite good and

after a few opening remarks from Kevin Van Zuilen (IEEE) and Eric Converse (ACORN), attendees were given the opportunity to observe the numerous demonstrations being conducted around the room. The demonstrations included: MIDI Music by Erin Kelley, ST Telecommunications and the BBS by Kim Stahn, Games (Lemmings) by Adam Kelley, 8-bit Telecommunications by Scott Schaffer, Emulators by Karl Fadus, Computer Languages by Ken Liechty and Bob Kelley, and Desktop Publishing by Ken Helms. A big THANK YOU to all those that brought equipment and conducted demonstrations. A thanks also goes to the IEEE for the pizza afterwards. A good time was had by all.

Plans for Future Meetings:

November 16 and 17 is the date for Pentacon, the Northeast Indiana Gamers Association's annual convention. Note that it is two days this year and ACORN has been given a large area at the Grand Wayne Center to show our stuff.

Several members are planning on attending the big Atari computerfest in Chicago November 23 and 24 also.

ASTMUM
ATARI ST/MEGA USERS (Montreal)

Our users' group consists of MIDI musicians, composers, videographers, artists, writers, technicians, students, teachers and business people. We also welcome new members, interested in learning about the ST/MEGA models and their applications, before purchasing.

Founded in 1987, ASTMUM provides its productivity-minded members with technical support, training and emergency assistance (24-Hour, Repair Hotline), laser printing and graphics services, as well as discounts (through participating dealers) on original software, computer hardware and music industry-related equipment.

To benefit its members, and the visiting public, our group has participated in these shows and expositions:

Windsor/Detroit International AtariFest, May '91
PRODUCTION '91, Montreal, June '91
SIIM '91, Montreal, June '91
WAACE AtariFest '91, Reston, VA USA, October '91
Chicago AtariFest, Rosemont, IL USA, November '91

We have kept our members informed of Atari's progress on their most recent models (TT, MEGA STE, ST Book and STylus) through our large periodicals library, videotaped show-tours and interviews with software and hardware developers. Encouraging members to form special interest groups, we hold monthly meetings (usually the last Sunday of each month) and offer seminars and demonstrations.

Some members offer Audio Recording and Music Technology courses, in "hands-on" studio environments, at generous discounts to other members. We have members who are masters of piano tuning and instrument restoration. Incoming members are impressed by the efficacy with which our specialists troubleshoot the previously unsolvable. Even singers find help for their vocal problems!

In addition to helping ASTMUM musicians market their CDs, LPs and cassettes, at exhibitions and retail outlets, we are assembling a "sampler" cassette highlighting some of their work.

If you use your Atari to create music or assist in performing it, and would like help in launching an independent release, our group may be just the ticket.

Membership information, advice, and sampler cassette price and availability may be obtained by writing to:

ASTMUM, P.O. Box 966, Station B Montreal, PQ, Canada H3B 3K5 or by phoning (514) 272-6631 (voice only)

Executive Exhortations by Kest Carter-Morgan:

I'm impressed that AIM's compendium of users' groups is expanding. I was also pleased that Bill and Pattie Rayl handled things for Darek Mihocka (Branch Always Software) during his absence at the WAACE AtariFest. I'm not surprised that he did not come; he was visibly irritated by unmindful and inconsiderate announcements, repeatedly blaring and reverberating into the seminar room, interrupting his presentation at the Windsor show in May. I know this, because I was there, videotaping the proceedings. When it happened to David Small, he tried to make a joke of it, but I could tell it bothered him too. This happened again at the WAACE show! It can certainly tend to discourage presenters from coming back.

A feature of the WAACE show was the use of separate meeting rooms for "hot" topics (e.g. Gaming, Education, DTP and MIDI), where volunteers gave presentations and training to interested visitors. In rotation with other MIDI presenters, our own Christopher Smith gave his "MIDI On A Budget" presentation, featuring the Cosh sequencer program and its upgrade path. This was also disrupted by loud, distorted announcements from overhead speakers. Eventually, a way was found to shut them off—once the damage was done.

If people are expected to prepare presentations and travel, from afar, at their own expense, to deliver them, the show organizers should, at least, prevent the intrusion of such announcements in seminar rooms and presentation areas, except in real emergencies.

Certain show organizers might argue that P.A. announcements are their best way of notifying attendees of events and prizes. In practice, such announcements are intrusive, often unintelligible, and won't be heard by attendees in their hotel rooms, restaurants and other blanked-out areas. Surely, at high-tech computer shows, we're capable of more effective communication methods without infringing on areas requiring control.

Perhaps because we were on a college campus in Ontario, smoking was better controlled at Windsor than at WAACE, where it went on unbridled. If the Shereton Reston had rules against smoking in enclosed public spaces, they weren't enforced. For our part, we discourage die-hard smokers from joining our group if they can't make it through meetings without smoking, because there are no provisions for smoking anywhere on our premises, except outdoors.

The above criticisms were offered in hope of smoother operations at future festivals.

In addition to MIDI room participation, we had booth #44 at the WAACE AtariFest '91. Featured at our booth were: the Sylvain Gagnon Quartet's CD, "Crépuscule", Ron Smail's Vocal Arrangements and Paul Etch, in person, demonstrating his Techno-Pop releases. While I dashed around, videotaping seminars and such, Garry Stocker, the fourth member of our party, assisted Paul at the booth.

As in Windsor, we also showed the Yamaha QY10 (a 32-voice, velocity sensitive, multi-timbral sound module, drum and percussion module, 8-track music and rhythm sequencer), which has its own, tiny keyboard for entering musical ideas on the fly. People were surprised to see that something making such exceptional sounds was no larger than a videocassette! With Midi In and Out, it can communicate with your ST and larger components. Since the QY10's memory is limited to 6,000 notes, you're best to examine one, carefully, to determine what it can and can't do, before buying it. A powerful package might include this unit and a MIDI data recorder or the ST Book, when available.

We brought along our Casio Midi Guitar and hooked it to the QY10 and our Kawai MS710. Garry and Paul alternated in playing it. Atari Explorer's John Jainschigg, at the neighbouring booth, even tried it out and conversed with us in French! A pleasant sidelight to our visit was finding a number of truly musical people among Atari Explorer's staff. This guitar reinforced the point that Midi is not the exclusive domain of keyboardists.

By the time you read this, we'll probably be demonstrating our MIDI skills and some new equipment at the Chicago ComputerFest, jointly held by LCACE and Atari, November 23 and 24, '91. We may also distribute, from our booth, a schedule of events for Montreal's 350th birthday celebration in 1992. Hey! Why don't we find a slot in there for an AtariFest as well? At the very least, Atari Canada could stop missing opportunities for involvment in certain shows that roll 'round every year. We'd like to hear your thoughts on this.

It is thrilling to meet other Atari MIDI enthusiasts, in person, at these shows and share mutual concerns. For some time, we've been gathering the names of individuals interested in forming local, Atari ST-based MIDI users' groups, internationally linked to larger, more established, MIDI groups like ours. If this interests you, please come and sign-in at the show, or write us at our aforementioned address.

We still remember and thank Brian Cassidy and family, of WAUG, for inviting us to the Windsor show. It took a lot of fortitude for the organizers and participants to keep the Atari lamp glowing while surrounded by recession!

I'd like to thank the organizers of both the WACCE and LCACE shows for their efforts to accomodate our special needs (e.g., equipment loans, and booth locations where our audio would not be directed toward facing booths at close range). The extra effort they put into smoothing the way for us was much appreciated!

We would like to thank Richard Nichol and friends for the loan of video and lighting equipment. As a result, we have a video tour of Gribnif Software's product line, revelations about a new TOS and FSM/GDOS, further enlightenment on hardware accelerators and a whole lot more for our members to absorb.

We, at ASTMUM, would like to extend to members and others in the Atari community our warmest wishes for the Holiday Season and success in the New Year!

Adieu for now!

KCM

B.R.A.C.E.

B.R.A.C.E. (Bluegrass Region Atari Computer Enthusiasts) meets the third Tuesday of each month from 7:00 P.M. - 9:00 P.M. in Conferrence Room B (located on the 4th floor), of the downtown branch of the Lexington Free Public Library. The current membership dues are $15.00 per year for an individual membership, $20.00 per year for a family membership, and $10.00 per year for an associate membership (an associate membership includes receiveing the monthly newsletter (AIM), but excludes the use of the library).

President Hal Nason (606) 269-8989

Layton ACE of Utah

The Layton Atari Computer Enthusiasts (L.A.C.E.) membership cost $20 per year. Privileges include the AIM monthly magazine, access to the 8-Bit and ST club libraries, monthly meetings, monthly AIM public domain disks, help and friendship. If you are presently not a LACE Club member and wish to join contact the one of following persons or write to LACE, c/o Irwin Brooks, 3897 South 2275 West, Roy, UT 84067.

Your elected 1991 L.A.C.E. Club Officers are:

Mike Russel President (801) 546-0707

Doug Hansen Vice President (801) 393-6849

Ken Karchner Secretary/Treasurer (801) 776-8015

Richard Clark 8-Bit Librarian (801) 825-5823

Kelly Knecht ST Librarian (801) 773-5652

Irwin Brooks Publications Coordinator (801) 731-1516

The L.A.C.E. Club Meets in the basement of the Clearfield Library every second Wednesday of the month at 7 p.m. Mark your calendars for the next three meetings. November 13, December 11- Games Night!! January 8, 1992.

If anyone asks, tell 'em you saw their ad in AIM!

Montreal ATARI Club ATARI de Montréal

The Montreal Atari Club Atari de Montréal (MACAM) is possibly the only bilingual club in North America which supports both the ST and the 800/XL/XE series of computers. We meet twice monthly at the Monkland Recreational Centre at 4410 West Hill in N.D.G., Montreal, P.Q., on the 1st and 3rd Thursdays of the month. The 1st Thursday is for 8-bit members, and the 3rd is for the 16-bit section.

Membership is $25 for 8-bit owners, $30 for ST owners, and $35 for those who have both machines. Membership includes the A.I.M. magazine subscription, Atari User magazine, our own disk-based newsletter and free access to the A.I.M. disk of the month for the appropriate section(s).

MACAM's mailing address is at P.O. Box 5418, St. Laurent, PQ H4L 4Z9. Further information can be obtained by calling Emanuel at (514) 744-3527 or Terry at (514) 696-3773.

Les membres francophones ou anglophones sont également bienvenues, et les renseignments sont disponibles dans les deux langues.

The Michigan Atari Computer Enthusiasts

September Meeting Minutes

This was a double event, MACE officer elections were held, and we had a swap meet with some nice deals going on. The September meeting came to order at about 7:30. In attendance were about 25 people; a couple of people were new to the club. Almost immediately, the election was held and these people became office holders in MACE for the next year:

President Ted Newkumet
Vice President Ed Hanson
Recording/Corresponding Secretary Mark Tappen
Journal Editor Michael Casper
8-bit Librarian Raymond Simmonds
16-bit Librarian David Haykus
Membership Chair Frances Simmonds
Meeting Coordinator Thomas Quattlebaum
Treasurer Denise Tappen

Some of these people have been in office before, although MACE is proud to welcome four new officers: Thomas Quattlebuam, David Haykus, Frances Simmonds and Michael Casper.

The swap meet was started after the election. A lot of software was there for the 8-bit and the 16-bit machines. A 65-XE Game System was for sale as well as a 100-meg hard drive. Personally, I think the hard drive was the best bargain of the night. Those of you who play adventure games would have loved the swap meet, as there were quite a few of those waiting to be bought.

Other MACE News

At the executive meeting, the new president started by going over each person's responsibility as far as what was expected of them. Then he went over the next year's goals for the club, which include the increase in attendance, the number of disks for sale, the content of future meetings, need for a BBS, etc. The BBS issue was being talked about at the meeting; one member has offered to let MACE use his, which is currently under investigation. Ideas for meetings for the next year were offered by some of the officers. The financial situation of MACE was then discussed, with ways to improve its figures over the next year. All in all, I would say it went well for the new executive membership.

MACE Special Events

As far as future news is concerned, the president announced that there will be a scavenger hunt for Christmas. The Great Atari Scavenger Hunt (as it will be known in the annals of history) is about Atari. Who's got the oldest Atari machine? Who's got the most complete 2600 VCS collection? Bring in those special/unique Atari items. Remember, the oldest Atari might be in your own closet (check the serial number tonight!).

The Great Atari Scavenger Hunt is open to all M.A.C.E. members. Prizes will be awarded in the following categories:

Oldest Atari Product
Most complete PONG Game Machine
Most complete collection of Atari-related objects
Most complete Atari 2600 VCS Collection
Oldest Atari 8-bit
Most Modified Atari 8-bit
Largest 8-bit software collection
Oldest ST
Most Modified ST/TT
Largest 16-bit Software Collection
Newest ST/TT
Atari PC
Most unusual Atari-related Product
Most unusual Non-Atari Computer

Winners will win prizes such as free disks from out 8-Bit and ST Libraries as well as bragging rights for being a true Michigan Atari Computer Enthusiast! Everyone who enters will receive a free Participation Raffle Ticket. What's that? Come to the meetings and find out.

We are also having a raffle to top off the Christmas meeting. Prizes will be demo'd at the next few meetings before our Christmas meeting.

For the MACE birthday party we will be concluding our Participation Raffle which runs until our birthday party meeting. The Raffle is being held to get people involved in MACE.

MID-OHIO ATARI USER GROUP

The Mid-Ohio Atari User Group (MAUG) meets once a month (no July meeting) at A&B Computers located at 1151 Park Avenue West (in the West Park Shopping Center). Meetings are from 7:00pm until 9:00pm on the third saturday of the month. A&B can be contacted at (419) 529-9999 for meeting confirmation. For more information about MAUG feel free to contact Chuck Steinman at (419) 529-9797 from 1:00pm-5:30pm Eastern time.

MAUG supports all the various Atari computer models and their users. AIM is the official user group magazine, and is included as part of the $12.00 annual dues (effective 12/91). Each member in good standing receives AIM each month (or as published) mailed to their home. AtariUser magazine is also available free to local members at A&B Computers, or Walden Bookstore in the Richland Mall. Back issues of AtariUser are available for $1.00 each (limited supplies available).

The club maintains both an ST and 8-bit disk library. We have all of the available AIM disks-of-the-month. These disks are available to anyone whether a member of MAUG or not. The AIM ST disks are $4.00 each, with quantity orders (three or more at the same time) being $3.50 each. The 8-bit disks are $3.00 each, and quantity orders (three or more at the same time) are only $2.50 per diskette.

Dues which are payed by check or money order should be sent to: MAUG c/o Chuck Steinman, Post Office Box 134, Ontario, OH 44862, USA. Please make the check out to "MAUG c/o Chuck Steinman". Once payment is received, you should expect to see your first magazine in approximately 6-9 weeks. Since orders are placed to Unicorn Publications the second week of each month, you should send your payment to arrive at least a week before that time to minimize the period before your first issue arrives.

R.A.C.E.

President Lewis Midyette 828-4319 Vice President Eric Schofield 851-5134 Secretary Don Nelson 942-2764 ST Librarian Tony Manino 851-8092 8-bit Librarian Arthur Katz 880-2047 Treasurer Jim Harrop 851-5134 BBS SYSOP Robert Yates 552-7053 Galaxy BBS 552-0974

Well gang, this is Eric, your current vice president. Things are going well in the Atari world and I am quite happy with the way things are going with the club. The membership is up, the attendance to the meetings have been pretty consistent, and the BBS is more active.

Let's keep things pumping on the BBS. Remember, this is your source for keeping up with the club. It is not the officers' responsibility to contact you every single month about when the meeting will be held. It is your responsibility to find out. Call the board and look under BULLETINS. The section "A word from the president of R.A.C.E." will give you details about the next meeting.

That's it for now gang, if you need any help, please get in touch with one of the officers or better yet, post a message on our BBS and let the whole club try to help you. Next month's meeting will be on January 15 at the Richard B. Harrison Library. Don Nelson will be showing off PageStream 2.1 and we will also auction off some versions of the software.

SALSA
ST Atari League of San Antonio

ST Atari League of San Antonio (SALSA), P.O. Box 18731, San Antonio, TX 78218.

SALSA is a users group for 16-bit Atari users, but also supporting the next generation of Atari computers: Mega STe/TT/Lynx. Meetings are held on the second Tuesday of each month at the Balcones Heights Community Center, 107 Glenarm, San Antonio, TX, from 7:00PM to 10:00PM. Special events are held from month to month depending on interest. New user classes are held each month to help users to learn the best ways for traversing the GEM environment.

Membership dues are $20.00 per year and members receive AIM as well as the option of receiving the club's newsletter. A one year membership without AIM is $15.00 and includes the club's newsletter. A subscribing membership is available to those not able to attend meetings and includes the clubs newsletter and all discounts available to normal members. A Disk of the Month is available at each meeting for $2.

President Kyle Miller 512-945-9469
Vice President Frank Hense 512-655-5411
Secretary/Treasurer Chris Cassaday 512-696-8057
Public Relations Doug Moen 512-659-7492
Software Librarian Shannon Stennis 512-666-2923
Hardware Librarian Russel Gibson 512-899-2797
Newsletter Editor Pat Birch 512-655-8970

General Meetings are the 3rd Monday of each month at the North Park Recreation Center Social Room, 4044 Idaho Street at 7pm. ST/8-bit workshop meetings are on the 1st Thursday of each month at the North Park Adult Center, 2719 Howard Street at 7 pm. All meetings are open to the public. Annual SDACE subscription dues are $18 which includes increased BBS access, AIM subscription, SDACE newsletter subscription, and reduced rates on the Disk of the Month. SDACE's address is PO Box 900076, San Diego, Ca 92190.

President Michael Bergman (619) 558-7866
Vice President Danny Rickey (619) 565-2179
BBS - 24hrs, 300-2400 baud, 65MB (619)689-8157

Greetings once again from San Diego (America's finest city)! After coming off of the HACKS Atari Show in Glendale last month, everything has slowed WAY down. The weather finally turned nice, people touched up their tans, and their computers are still trying to recover from the glut of software and hardware add-ons purchased at the last computer show. My computer is suffering the same sort of dilemma most of us feel after Thanksgiving—too stuffed to function. I haven't even opened up all of the wrappers on my new goodies yet!

On the plus side, San Diego now has four Atari-supporting BBSes, with two added in the last year. Articles concerning Atari computers, both 16-bit and 8-bit have been appearing in the local computer support magazine, normally frequented only by the MS-DOS and Macintosh crowds. With 75,000 copies published weekly, our exposure is going up and all indications are that there is still considerable interest in Atari products. These indicators, plus the substantial turnout at the Glendale show should give comfort to those of us who stand by our machines!

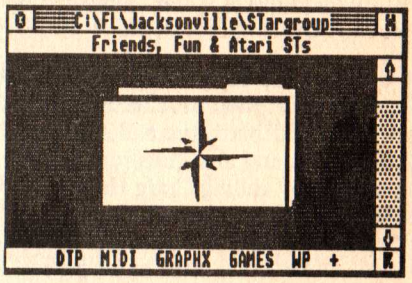
On the minus side, with the beginning of a new school semester, we are losing some of our more talented folks as they bury their noses in the tomes of higher education. Michael Bergman will be stepping down as SDACE President shortly, returning to status as a full-time student. On behalf of the members, we'd like to thank Mike for a job well done, and for some nice programs as well (Is the desk accessory animation your swansong?). We will have elected new officers by the time you read this and hopefully will be working on a new schedule of product demonstrations and tutorial sessions. Join us at any meeting, you're always welcome!

SAGINAW/TRI-CITY ATARI USER GROUP
STAG

There isn't much to report on this month since only three ST and two 8-bit people showed up. Two of the ST faithful were the hardware volunteers! Apparently the interest is not there. We will contact you by phone before the November meeting to find out if there will even be a meeting. The future of this Atari club is uncertain at this point. Several options are available:

1. Continue as we are, with low meeting attendance.
2. Meet at someone's home so nobody will have to bring equipment.
3. Poll by telephone each month, meeting only occasionally.
4. Disband the club. a. Refund the unused portion of the dues and divide the rest. b. Buy some software and hold a drawing.

If anyone has a suggestion, please speak up. The club you save may be your own.



The STargroup is a computer club specifically for helping members use their Atari STs. Our yearly dues are only $15 and now include a quarterly newsletter along with a year's subscription to AIM. Other benefits include free access to our library of over 50 megabytes of Lharced public domain and shareware programs for your Atari. The club BBS, the Bandersnatch, has had a fatal hard drive crash and thus no longer exists. We do have a message section on Lief's World (904) 573-0734 thanks to the generous sysop Lief!

The turnout at our October meeting started out a little small, but as the night progressed STargroup members filtered in one by one. The majority of the meeting was taken up by an eyewitness report of the WAACE show by Pat Augustine, our Vice President. He brought back lots of goodies, including the new DC Data Diet and the CodeHead's MultiDesk Deluxe. Unfortunately, he has not been able to use them yet because his 2.5 meg 520ST died just last week. Pat is happy to say a new STE along with a full set of four one meg SIMMs is on the way!

I am still trying to work out the joint meetings with another local Atari users group, FACE. It looks like we will be meeting with them either the 3rd or 4th Tuesday and the normal STargroup meeting will be the 1st Monday or Tuesday of each month. When they become firm, I will place the meeting dates here.

The STargroup meets on the first and third Tuesday of each month at the La Mirada Apts. off of Powers Ave. in Jacksonville, FL. Everybody is welcome.

President S. Michael Hallack (904)646-0567
Vice President Pat Augustine (904)737-8452
Disk Librarian Jeff Holland (904)737-8452
Secretary/Recruiter Bob Waddell (904)737-1905

WAUG General Meeting Minutes, October 8, 1991

The Washtenaw Atari Users Group meetings are held every second Tuesday of the month at 7:30 PM in the Michigan Union building on the campus of the University of Michigan on State St. at the corner of S. University in Ann Arbor, MI.

Club dues are $15 per year and provide access to the PD library and a subscription to AIM. Meetings feature demos of both 8-bit and ST hardware and software. Non-members are welcome to attend and questions are invited. Officers can be contacted by calling Craig Harvey at (313) 971-8576 or by calling the MOlin's Den BBS at (313) 451-0524.

The September WAUG meeting was opened at 7:30 PM by President Dave Brzezinski as he passed out tickets for our monthly free raffle. The meeting began with a showing of the video tape from the recent Windsor/Detroit Atarifest. It was a little long in some places but contained some interesting interviews with such luminaries as Jeff Earle of Atari Canada, Nathan Potechkin of ISD Marketing and, of course, the infamous Charles Johnson "bathroom interview."

After nobody could stand any more of the tape the meeting got down to some real attractions, mainly the showing of a TT computer brought by Bill and Pattie Rayl. Bill showed the members some demos of 256 color GIF pics and displayed the full color cover from AIM on the TT alongside the black and white image of the same cover on the club's STE. He then spoke for a while about some of the hardware features of the TT versus the ST, more ports, a real SCSI port, a LAN port and the provision for a VME bus add-on card. Bill liked the speed (32 MHZ) and color capability of the TT, but was somewhat disappointed with the fact that the memory upgrades were proprietary to Atari.

8-bit Librarian Dick Selke presented the AIM disk-of-the-month to the members as a welcome addition to the club's library.

Mike Olin then took the floor to once again present a cornucopia of ST disks to any interested parties—two disks full of games, a music disk, a utilities disk, the October AIM disk, and several disks of assorted programs provided something for everyone.

A proposal was brought to the floor by Mike O. that since we would have to purchase another 8-bit hard drive interface for the club that there might be some interest among the club members in making a group purchase of several. Anyone interested should make an effort to contact Mike.

Mike also talked about his efforts to get Soft-Logik user group copies of Pagestream 2. No go. Since we had gotten copies of Pagestream 1.8, we were not eligible to receive version 2.0. Well, it never hurts to ask.

VP Craig Harvey then spoke briefly about his difficulties in finding the Panasonic C1391 monitor that the club had decided to purchase. They could be found alright, but not at the price we wanted to pay. Craig did, however, finally succeed and we should have our multisync monitor in time for the November meeting.

The monthly free drawing came next with the lucky 8-bit winner getting "Drop Zone" and "Command" going to the ST chosen one.

As the meeting was adjourning amidst brisk sales of library disks, Craig decided to stir up some more action by announcing that Version 2.25 of EdHak was available for immediate shipping. (He had some in his pocket).

Daniel M. Cable, Secretary

AIM Subscription Renewal

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Please make check or money order payable in US funds to Unicorn Publications, 3487 Braeburn Circle, Ann Arbor, MI 48108.

I wish to receive your Disk of the Month. I am an AIM subscriber.

☐ ST/Mega (12 double-sided disks) — $50
☐ Mac/Spectre (12 DS disks) — $50
☐ Atari 8-bit (12 SS/SD "flippies") — $50

Sign me up for your Disk of the Month only. I am not an AIM subscriber.

☐ ST/Mega (12 double-sided disks) — $60
☐ Mac/Spectre (12 DS disks) — $60
☐ Atari 8-bit (12 SS/SD "flippies") — $60

ATARI INTERFACE

Curse of the Azure Bonds
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Jeff Williams of ICD reported, "We did very well with sales of all our products at WAACE. It was great to get to talk with so many loyal owners of ICD products. The ICD booth was very busy. We had a new product that just blew off our tables (and also the tables of other dealers carrying it at the show). It was the AdSpeed STE, the new cousin of our popular AdSpeed ST. It's expressly for 520STE and 1040STE systems. It comes complete with a math coprocessor socket, so all of you DynaCADD users, as well as users of Lexicor Software's Phase-4 products, can add more punch to these applications if you choose to add a 68881 or 68882 (DynaCADD, at this time, will only use a 68881). And installation is pretty easy since Atari has the square 68000 socketed in the STE systems. AdSpeed STE just plugs in and goes!"

ICD's Tom Harker adds, "This WAACE was our all time best American Atari Show which is saying a lot considering the small crowd. I thoroughly enjoyed it."

Ron Coleman of Sudden, Inc. says, "My sales were up 50% over Glendale, which was also a very good and profitable show. The word is starting to get out about Sudden View, but I think [WAACE] did a great job getting warm bodies with cash to the right place at the right time."

Paul Wu of Omnimon Peripherals/WuzTek said, "Omnimon Peripherals Inc. made its first WAACE appearance and I am glad we went. The show was well organized and the public was enthusiastic. To give you an indication of how good the sales were, we sold out of all five of our Omnimon Rainbow monitors we brought with us in the first five hours. Our new Omni-Chrome graphics card and HDrive disk system also received enthusiastic response.

"On the first day of the show, both Noel and I were pretty much glued to our booth busily giving demos. By Sunday, for the first time in our 3-year show-going history, we ran out of brochures (and we brought lots of them!). Besides making sales, we also had a good time meeting new people and making new friends. We also gave away DEKAs, Xwitchits, and T-shirts as prizes to lucky winners."

More Comments

John Townsend of Atari commented, "As for the show, Saturday was packed! Ken Badertscher and I did an 'Atari: Technically Speaking' seminar on Saturday afternoon and we played to a full house. It was standing room only. Ken and I have done a number of these seminars at various shows and really enjoyed them. But, I must say, the seminar we had on Saturday was by far the most enjoyable for me. We had a group

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GEMULATOR

Atari ST Emulator for the PC

Today, many ST users use PCs at work and school. PC emulators do a minimal job of emulating the PC software on their STs at home, but they are slow, difficult to install, and can't emulate VGA graphics. What a waste of time!

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of people with some great questions for us to answer, and they really were a pleasure to talk with. They even laughed at some of our really lame jokes! What can be better than that? :-)

"I also met some people I had not seen for awhile or hadn't met before. I had the opportunity to see HyperLink for the first time, and it was really interesting talking with George and Dave at the show. This product really looks interesting and I can see a great deal of potential for it in the future. If you haven't looked at HyperLink, give it a look at one of the upcoming shows. It really is neat and getting neater all the time! :-)

"Dave Small did one of the most interesting talks I have ever seen. And, considering Dave's reputation for talks at shows, that is saying something. His "music video" demonstrating Burst Mode was pretty neat, certainly a step off the normal path. It was also great to see Dave hand out Spectre 128s to people at the seminar. For those that don't know...Dave handed out Spectre 128s at the show as a way of saying 'Thank you' for all of the support you have given him over the years. It was a mob scene!"

Charles F. Johnson of CodeHead Software said, "Wow. Great, great show. I'm stunned. I'm speechless. Somebody pinch me, I must be dreaming. Ouch! Hey, that was too hard!

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George Richardson of Gadgets and Merlin Group

"It was a fantastic show, and not just for the sales (which were twice as good as our previous best show), but for the positive attitude so many showgoers expressed. I had a great time talking to all the folks who stopped by our booth and I wanted to publicly say 'Thanks!' to everyone who came up and introduced themselves. It was really cool. (Essentially, I talked and demonstrated _nonstop_ for both days. Whew.)

"We sold out of MultiDesk Deluxe the first day, before the end of the show. So, on Saturday night, we spent a few hours in John's room duplicating more disks, with Dave Small providing entertainment as CodeCopy chugged away. (Dave certainly has a way with a hotel room TV set; in his hands it becomes a sort of psychic lug-wrench.) <grin>

"We had tons of interest in Avant Vector. Believe it or not (and I'm still not sure I do) we sold every copy we brought to the show and took orders for more. Pinch me, somebody! Ouch! In about ten seconds, I traced the CodeHead Software logo and converted it to vector graphics. Then, in another ten seconds, I created a shadowed, skewed (italicized) and rotated version of the logo, with a grey-filled "sun" image behind it...ending up with a very professional graphic in less than a minute."

David Thompson of JMG Software International said, "Been a long time since I've been in one room with so many exited Atari Users and Happy Atari Developers! It was definitely worth the trip.

"As far as Saturday's Banquet goes... Fortunately I didn't get hit with any of the flying tomatoes, cucumbers, olives, etc that tended to mysteriously make their way from our table (the ISD side of our table that is) to the CodeHead's table to Dave Small's table and back. I

think it was Nevin at the table in the centre that was causing all the trouble :-) Of course others could say that Nathan brought down Julius just to cause trouble!!!

Talk about a Banquet!

Step Ahead Software's Nevin Shalit (who was also elected the new president of the IAAD at the show) commented, "The banquet was definitely a trip. Dave Small's table was the rowdiest, and did a few well-orchestrated waves (you know, the waves you see at baseball games). There was a little food throwing by various young 'uns at a few tables (but nothing out of hand) and Nathan's speech was very amusing and well delivered. Perhaps the most extraordinary thing was seeing Nathan actually *nervous*. This is the man who has no problem going cheek to jowl with the Tramiels, but immediately before his speech Nathan was as white as a sheet. Once he got started, though, he rolled right through the presentation."

Bob Brodie from Atari added, "The banquet was indeed excellent! The food was wonderful, and I was very flattered to be offered a seat at the head table. Charles Smeton was kind enough to allow me to bring along the people that I'd promised to dine with. That means I had the best seat in the house: Michelle Taylor from Atari-Oz on the left, Tricia Metcalf from Gribnif on the right, Darlah directly in front of me! :) Oh yes, and Nathan did indeed give very fine speech. He gave quite a few of us new names (mine is Bobbit), and all of us plenty of laughs."

Atari Explorer's John Jainschigg reported, "Amazing show. Simply amazing. We had the pleasure of giving away 1,000 copies of Atari Explorer's two most recent issues, and of getting, in return, about 100 new subscriptions.

"The banquet was magnificent. Dave Small's table did a set of circular 'deep sala'ams' which really had to be seen to be appreciated. Nathan's speech, in which he assigned caricatures from the Lord of the Rings to major players in the Atari market, was absolutely the stuff that comedy is made of (not to mention the breakdown of cordial business relations (grin)). And, we had the pleasure of seeing people we normally see in T-shirts, in ties!

Dorothy Brumleve added, "I've been to a *lot* of shows, and I have to tell you: this WAACE was the partyingest show I've ever been to! The WAACE crew and Current Notes put on parties and get-togethers before, during, and after the show, and of course there was also the "formal" banquet; there was so much going on on the social schedule that I almost forgot I was there to work!

"Mine was a respectful and dignified table at the banquet. We did not engage in the food fight even when wayward ammunition tempted us (as it landed

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Brian Donally of ST Informer (right) along with Double Click's Gilbert and Michael.

within our reach). Next time I intend to be seated where the action is!"

Personal Observations

At the banquet, Craig Harvey, Bill and I were seated where the action was! We were part of the wave at the Dave Small table. To be precise, it was really the Tom Harker/ICD table before we sat down and were later joined by George Richardson and then by Dave Small. Before the dinner got started, Tom and Dave serenaded Charles Johnson and John Eidsvoog at the "CodeHead table" with songs by Neil Young.

Once the unsuspecting waiters served the salads at our table, it was history! Olives were flying fast and furious, and all of us stockpiled our cherry tomatoes in the event of a first tomato strike by the CodeHead table. Tom even went so far as to instruct Dave in the art of catapulting bags of sugar with table spoons. Dave got a lot of laughs when a tomato from the CodeHead table did strike him, putting an end to the crossfire, but not the kibitzing during the speeches.

The rest of us poor souls were just putty in the hands of masters Tom and Dave. I forget who suggested the wave—it was either Tom Harker or Jeff Williams, I think—but we all complied! When Joe Waters was listing off the names of people who've helped him over the year, we all were encouraged to chant the name of each person. At one time, I thought we were chanting "Seafood," but it turns out we were saying "Steve Two" because Joe has a lot of Steves on his staff!

The quote of the evening came during the food fight when someone leaned over to Craig Harvey and said something about how expensive the meal was. Craig said, "You're not paying for the quality of the food; you're paying for the atmosphere!"

This wasn't the only rowdy time, by any stretch of the imagination, just the main one "officially" sponsored by WAACE! Dave Small and George Richardson were quite a team during the "before the show, but after setup" open bar and refreshment time on Friday night. I watched as Dave set "a new speed record" when he cranked a Mega ST up to 7.1 MIPS (million instructions per second) with the SST board just to see if it would work—a "normal" ST does about 0.7 MIPS. Meanwhile, George was standing next to me shaking his head and saying the equivalent of "Don't do this at home, kids."

Paul Wu of Omnimon and Rich Betson of Rimik

Step Ahead Software's Nevin Shalit (middle) shared a booth with the Colemans of Sudden, Inc.

We got to hear all sorts of stories during the relaxing times of the weekend. George Richardson and Tom Harker shared stories about how they each started out with very small companies in their garages or whatever, because they found they couldn't work well in the normal workforce.

George even had pictures of a real R2D2 robot he designed from spare parts that actually worked. He said the little robot won a lot of Halloween costume contests, but he had to decline them because the little guy wasn't in costume and wasn't human. I believe it! I guess that says a lot about how good this guy is with hardware. (George Richardson did the hardware design of the SST030, MegaTalk and Chromax color boards, all sold by Gadgets by Small.)

Jim Allen shows off his accelerator boards in the booth he shared with ISD Marketing

For me, the nicest part of the socializing came after the show on Sunday night. Ralph Mariano (ABCO Computer and ST-Report), Charles Johnson, John Eidsvoog, Doug Hodson and friend Brent (Rising Star), and Bill and I were joined later by Maura Fitzgerald and John Jainschigg in the Sheraton's bar.

Charles and Ralph were talking about custom cases for musical/MIDI equipment which lead to talk about Charles's playing in GreyHound commercials. I said that I'd probably heard him play, when John mentioned that he plays the music in Barbie commercials.

I then commented about how expensive Barbie's gotten these days saying I could remember when Barbie only cost $3.95! This lead to a commisseration between myself and Maura. Her mother always bought her generic Barbies, which we both agreed weren't as good.

Charles talked about how he always wanted shoes with real springs in them. He talked about the ones that briefly appeared on the market, but weren't any good, and got pulled because they caused a lot of broken bones. John Eidsvoog told us how he had always wanted a pogo stick, and when he finally got one, he couldn't get it to work right. John Jainschigg always wanted a unicycle, and he was envious of Charles because Charles had one when he was younger.

I guess the moral of the story is that computers, and especially computer shows, let you be a young kid again? Or, how about stick around after the shows to see the human side of your favorite developers!

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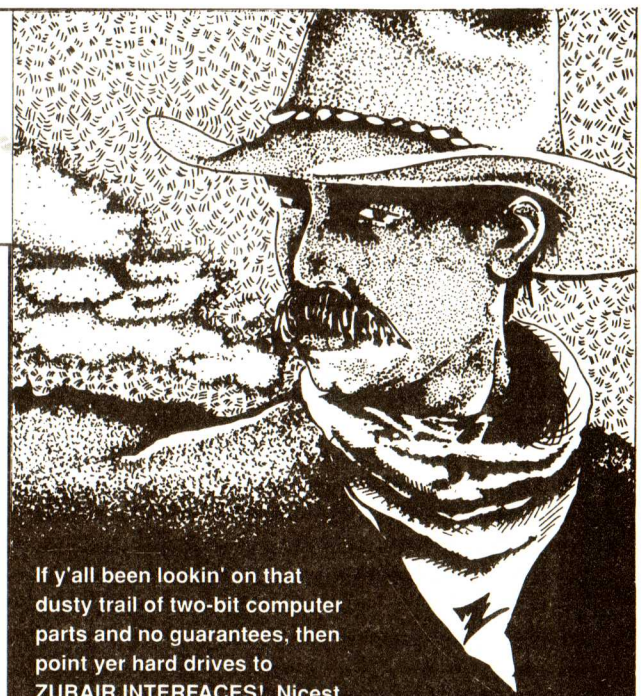

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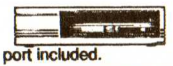

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A-T-A-R-I

(Answers, Tips And Relevant Information)

Multitasking on the 8-bit Atari?

Paul Alhart (AFED)

Questions that Keep Me Awake at Night

Have you ever wondered about some of these things. Like, why would someone put a door in a building and then put a sign on it that read "This door must remain *closed* at *all times?*" Why are images in a mirror reversed left to right, but not top to bottom? Why can't *my* computer do two things at the same time?

Well, these, and other such questions, have troubled me for some time.

Here is another that has really been bothering me. I increased the memory in my Atari to 256K. The basic computer accounts for 64K of that, leaving 192K of extra memory to be used via bank switching. I normally boot up with two single density RAMdisks.

Each RAMdisk consumes 90K, so that is 180K for both. A quick check shows 12K left over. What good is this extra 12K? It's not enough for another RAMdisk. How do I know if it even works?

Recently, in hopes of getting a better night's sleep, I went on a quest for answers to some of these puzzling questions. I'm still trying to find out about the door and the mirror, but I did solve the extra 12K problem. At the same time I was able to get my Atari to kind of do two things at once.

Actually, your 8-bit Atari is doing a lot more at one time than you may realize. Sixty times a second it checks the joystick ports, updates the color registers, updates the screen display and a whole lot more. All the while, it appears to be doing nothing more than waiting for you to press the next key.

It accomplishes all these things through the use of interrupt routines—a bunch of short machine language programs that are a part of your Atari's operating system. Although only one thing is really being done at any one time, they are done so fast that it appears as if they all are happening at once.

Knowing all this and little else, I decided to try and write a program I had been kicking around in my head for some time—a calculator program.

No, not just another calculator program, but one written in Assembly language, that resided in this extra 12K of memory, and could be called as an interrupt routine. That way, I would always have a calculator handy even if I was running a BASIC program, writing a program in PILOT, or just working from DOS.

It turned out to be quite a learning experience. My first problem was to figure out which 12K of the extra 192K was free to use. Then, I had to determine how to get the code to boot itself into the extra 12K of RAM. Having written only one program in Assembly before this left me with lots of book work and experimentation to get it all to come together.

But what I ended up with surprised even me—MagiCalc XL.

MagiCalc XL

Pressing a "Hot Key" combination instantly stops the current operation dead in its tracks and transfers control to MagiCalc. The four function calculator displays entries and results in Decimal, Hex and Binary all on the same line so conversion between numbering systems is unnecessary by the user.

Entries can be Decimal or Hex and mixed operations are supported such as (1234 * $ABCD). PEEKs and Double PEEKs are also supported. Upon exiting MagiCalc, the computer will resume what it was doing before you accessed MagiCalc.

OK, so it's not true multitasking. It is really two programs resident in RAM at the same time, similar to a desk accessory on an ST. It fooled my wife, though.

Some of page 6 had to be used for the calling routine, so it won't be 100% compatible with all programs or cartridges. But, if I ever need a calculator or just a number conversion while programing in BASIC, Turbo BASIC, Pilot, DOS, etc., MagiCalc is just a key stroke away.

Although written for a RAMBO 256K XL, MagiCalc XL will also work on any 256K or greater 8-bit Atari that uses the XE bank switching scheme. (Switch address $D301). It will run on a stock 130 XE as well.

It can't be used with a RAMdisk on the 130XE, however, as the RAMdisk uses all of the 130's extended memory.

MagiCalc XL only uses a little over 1K of this extra RAM, but now I know that the extra RAM works and at least one thing it is good for.

It's time for me to head off to bed now. If only I could figure out the door and mirror questions. And "What if I had two different programs in that extra RAM at the same time?" How about three programs, or four, or five, or...?

Postscript

Due to a strike called by my local union last week, I am presently unemployed. Therefore, I have decided to offer MagiCalc XL as Shareware in hopes of making millions of dollars and keeping my creditors at bay. Look for MagiCalc XL to appear on a future AIM 8-bit DOM.

If you can't wait, you may order the program and documentation disk directly from me for $6. For $10 I will also include my complete and heavily commented MAC65 source code that you can study, modify, or use to create your own Extended RAM programs.

Paul V Alhart
524 North Zee St.
Lompoc, CA 93436

A-T-A-R-I Continued
Creative Programing

There are as many ways to code a routine as there are programmers to do the coding. The following four short 6502 assembly routines all do exactly the same thing but in different ways. They all cause a system "Cold Boot" by executing the Atari operating system COLDSV routine located at address $E477 (58487).

Listing 1

```
JMP $E477
```

Now that is pretty straightforward. This routine uses 3 bytes and takes only 3 clock cycles to execute.

Listing 2

```
    LDA #$77
    STA DUMMY+1
    LDA #$E4
    STA DUMMY+2
DUMMY JMP $FFFF
```

In this case, a jump to a dummy address ($FFFF) is set up. The new address ($E477) is then written in place of ($FFFF) during program execution. (13 bytes & 15 clock cycles.)

Listing 3

```
    LDA #$77
    STA DUMMY+1
    LDA #$E4
    STA DUMMY+2
DUMMY .BYTE $4C,0,0
```

This is the same as Listing 2, except the dummy jump instruction was replaced by the three bytes ($4C,0,0). $4C is the Machine Language code for JMP. The two 0s are the dummy bytes that are replaced during program execution. (13 bytes & 15 clock cycles.)

Listing 4

```
LDA #$E4
 PHA
 LDA #$76
 PHA
 RTS
```

This is *not* a subroutine. I like to call it The Return From Nowhere. When a JSR is performed, the current address is taken from the Program Counter and pushed onto the stack. When a RTS comes along, the address is pulled from the stack, one is added to it, and it is placed back in the Program Counter.

Program execution then continues using this new address.

In Listing 4, there is no JSR instruction. Instead, we push the address we want onto the stack and execute a RTS. Note that we must subtract one from the address, because the RTS will automatically add one to it. Also, it is pushed onto the stack in the order of High byte/Low byte. This allows the RTS to retrieve the address from the stack in the standard Low byte/High byte order. (7 bytes & 16 clock cycles.)

Listing 1 uses less code, less bytes, and executes in less time than the other listings. Why use anything else? Listings 2-4 allow your program to direct which address to jump to. This can be used to set jump addresses *on the fly*, much like conditional Branches but without the address boundary limitations imposed upon Branch instructions.

Besides, it can't hurt to learn a new programming technique now and then.

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HOW WE PRODUCE

Sometimes, I get the feeling readers of Atari Interface think we have big corporate headquarters and tons of staff. Nothing could be further from the truth! I'm always amused when a reader calls up and asks to speak to someone in the circulation or editorial department.

I'm amused because Bill and I are the only "in-house" staffers. We're it! We're the circulation department, the advertising deparment, the mailroom, the Board of Directors—the whole shot.

We get lots of help from our readers, though, and this help is appreciated. All the columnists and users who send us articles are also "staffers," but the only people involved day after day in the nitty-gritty of magazine production are Bill and myself.

I thought I would tell a bit about how AIM is produced and also talk about the software we use to run the magazine and keep track of business.

Pattie at work on the Atari STE in the Unicorn Publications "computer room."

These two topics really go hand in hand, since software is what makes it possible for us to run a business and publish a magazine.

Hardware

First off, our hardware set up is very modest. We currently have a newly-acquired four meg TT030, a Mega4/STE we have had since last December, and a four meg STe we've had for almost two years. On the Atari 8-bit side, we have a 256K 1200XL and 810 disk drive that is on loan to us from a devoted member of the Atari Classic community.

Our "crowning pride and joy" is our Hewlett Packard LaserJet II, with Pacific Page Postscript Cartridge. The HP laser has served us well over the four plus years we've had it.

Panic set in a few months ago when lightning struck nearby, announcing a thunderstorm and frying one of the HP's internal controller boards. Fortunately, insurance covered the repair cost and we were up and running in time to print the next issue.

BBS Connection

The STe runs our multi-line BBS, the Treasure CheST. We have a DC Port from Double Click Software that connects to three phone lines (two of them 2400 baud and one 9600 baud). Using MichTron's BBS 3.0 software, we can have up to four people online at once.

The main purpose of the BBS is to give people an easy way to get articles and information to AIM, but we also have a lot of local (and not so local) users calling in. We've even had "online seances" that have been a lot of fun.

Bill's handle on the BBS is Ancient Mariner and I'm Emerald Mermaid. The number for The Treasure CheST is (313) 973-9137.

The BBS is run from our "computer room," the second bedroom in our two

bedroom townhouse. The magazine has totally taken over that room, and we've even had to expand our work/office space into the basement. We're in the process of shifting the computer room overflow from our living room and kitchen area into the basement.

Text and Graphics

Once the files are collected from the BBS, as well as from the online services and the US mail, Bill uses EdHak (Clear Thinking) to separate the articles from the club minutes and mailing lists.

Bill swears by EdHak, written by WAUG member and friend Craig Harvey. Bill writes all of his reviews in EdHak, but I still use ST Writer for my share of articles. I've used ST Writer since 1986, when we got our first ST, and nothing has enticed me away yet!

Pictures are as important as the text files, and we use a combination of Prism Paint (Lexicor Software) and MultiViewer Graphica (WizWorks) for graphic editing each month. Prism Paint is good for working with bitmap color graphics, especially in the new TT resolutions. MultiViewer Graphica is almost a necessity for speedy work on monochrome IMG scanned images.

On our "gotta get soon" list of software is an autotracing program such as Arabesque (Gribnif Software), Avant Vector (CodeHead Software) or Silhouette (Maxwell CPU). From playing around with the demo versions of these packages, seeing the software demoed at shows and reading the press releases, they are all very impressive.

Currently, we're leaning strongly toward Avant Vector—it has a more intuitive feel (a purely subjective thing) to the program, supports TIFF and IFF formats and can output GEM, Calamus CVG or EPS graphics. The EPS support is *very* important to us, as we do nearly all our work in Postscript.

To get snapshots of the programs reviewed, we use an old freeware program called Degasnap. Recently, a cartridge called The Ultimate Ripper (Power Computing) allows us to get "snapshots" from copy-protected commercial software. Prior to the Ripper, we had to take photos of the screens.

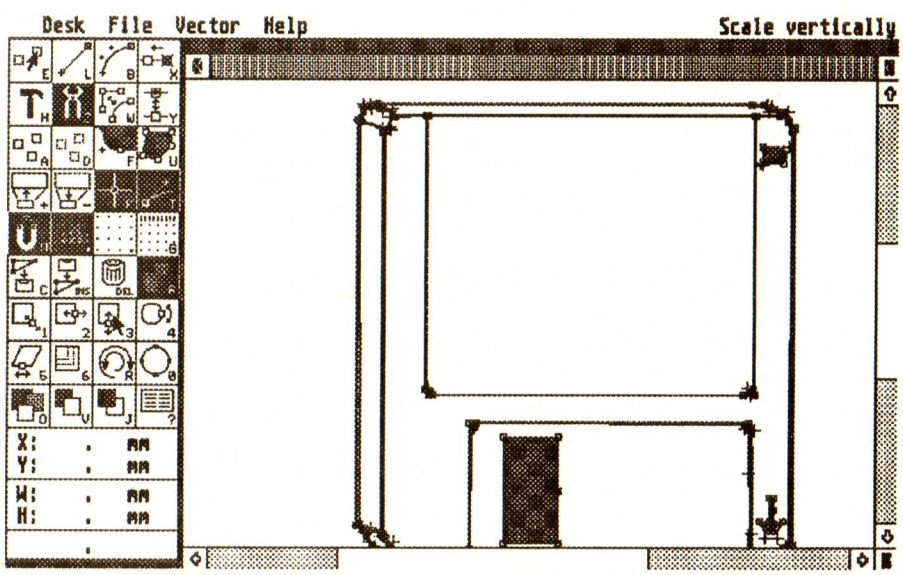
Putting It All Together

Editing the articles and taking snapshots takes a few days; longer if we have to write in-depth reviews for that particular issue. Once Bill gives me all the edited files and pictures, I start laying the magazine out in PageStream 2.1 (Soft-Logik Publishing). We'll have an in-depth review of PageStream 2.1 in the next issue or two.

When we first started the magazine back with the December '87 issue, we used Publishing Partner. Then, we moved to Timeworks Desktop Publisher because of its cleaner printed output and ease of use.

Now, with PageStream and Calamus (ISD Marketing), the ST has a solid base for professional DTP. PageStream 2.1 and Calamus SL are as good, if not bet-

PATTIE SNYDER-RAYL



Avant Vector

ter, than anything else out there for *any* computer platform.

After seeing a demonstration of the new Calamus SL at the WAACE show, I have the feeling we'll be using Calamus a lot more in designing and producing the magazine each month. The color display and manipulation of graphic elements are exceptional! I look forward to working with SL once the Postscript modules are available.

The Last Lap

Actual layout time of the magazine usually takes about three or four days. During this time, Bill is busily editing the club minutes and making the disks of the month. Bill calls CompuServe and GEnie and downloads any recent files of note. He also receives disks from Germany, the UK and Australia. Usually, Bill weeds through a meg or two of ST/TT software, two or three disks of 8-bit software and several megs of Mac/Spectre software. The best of the files appear on each month's disk, after being ARCed up and made self-extracting. The READ.ME files from each disk are then printed in the magazine.

Once the text files and graphics are laid out, the pages are printed for Bill to proofread. When Bill is finished proofing, we reprint any changed articles, and work on the Table of Contents, Reader's Viewpoint, Editorial Ramblings and Atari Bulletin Board pages. Saving the editorial page and Bulleting Board for last gives us an opportunity to get in late-breaking news before we ship the issue off to the printer.

I then "paste" in the hardcopy ads (using wax) into the places I've left while laying out the pages. I also indicate to the printer where all pictures are to be placed and in what percentage size, and finally, where any spot color is to be used. This bundle is then shipped off to our printer, having taken about a week to week-and-a-half from start to finish.

Once the issue itself is out of the way, we work on the insert, which only goes to direct subscribers and participating user groups. Club minutes and other club news is laid out in an 8-page insert, sometimes filling all eight pages and sometimes not. Finding filler can be a bit challenging at times! Because we create the insert after the issue is already being worked on by our printer, we can get straggling clubs into the issue just as it's about to be mailed out.

Mailing

Mailing is quite an experience! We used to do it ourselves on our kitchen table, merging mailing labels from over 50 clubs and our own direct subscribers, then bundling and bagging all the issues for 3rd Class mailing. We used to cut all those mailing labels up and sort them by hand, first into state piles, then into three and five digit ZIP code piles!

Then, we got smart! Actually, the job just got way too big for us to handle with over 80 participating user

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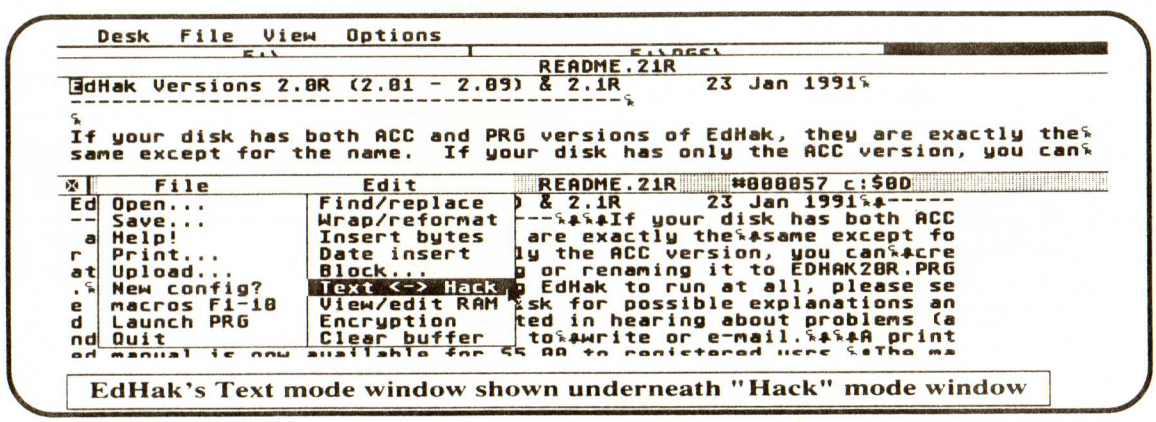

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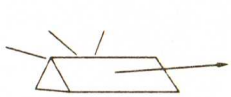

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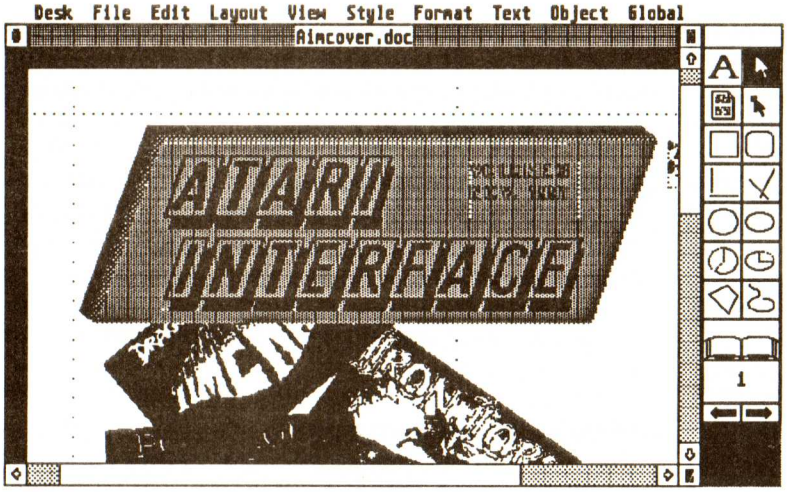


Above: PageStream 2.1, with the Nov. '91 cover of Atari Interface loaded.

Below: Tracker/ST 3.0 handles our subscriber databases.

groups now. The first thing we did was get the clubs to send us ASCII mailing lists instead of physical mailing labels. The second thing we did was get an outside firm to do the actual mailing for us. Now, the computer does the sorting—once Bill imports all the lists into SuperBase (Precision Software)—and we take the labels to a local company specializing in magazine and catalog mailings.

Bill takes each month's mailing lists from the participating clubs and runs them through EdHak to get them into an easily importable format. Then, from Tracker/ST (Step Ahead Software), he exports names out of our own database of subscribers and imports all the lists into SuperBase Professional. Once in SuperBase, the lists are double-checked for accuracy of importation. The database is then sorted by ZIP code and ready for printing. About 3,000 labels are printed.

Doing the labels is a lengthy process. Taking the lists from the 80+ clubs participating in AIM and adding our own list of subscribers is a huge task.

Bill has to add or delete club members, compare the lists against those clubs who've paid for that issue, and keep an eye out for importing problems in SuperBase! This job usually takes a couple days, but it is much faster than trying to sort labels from over 80 clubs by hand!

The Aftermath

When the labels are done, we have a little breather—only a little one, though! I start calling developers about advertising in the next issue and do bookkeeping type things while Bill sends out software to reviewers, or "plays" with programs he'll be reviewing himself.

Calling for ads isn't a time-consuming process, but it does take a while sometimes. This is were I get to play phone tag with people! Even though I start soliciting ads at the begining of the month, it may be right up until we send the issue off to the printer that we receive ads from developers and dealers!

During this time, we also start talking about what theme, if any, will be in the coming issue and trying to decide what will appear on the next cover.

Somewhere during all this, we also send the Disks of the Month to be duplicated. The duplication process takes about two weeks. When those are back, we print out the lists from Tracker and stuff diskette mailers. We use PageStream to create the disk labels and print them on Avery laser labels. We send out over 100 ST disks and 50 8-bit disks each month counting clubs and subscribers, and our Mac/Spectre disk is starting to take off as well.

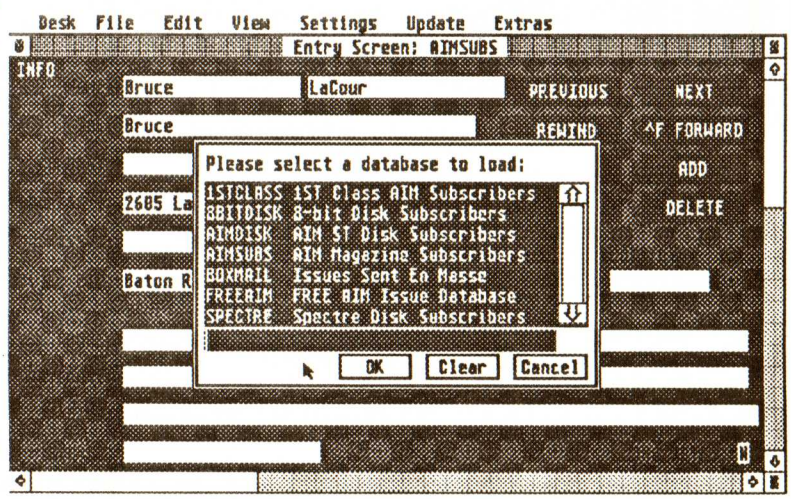
As an aside, I recommend Computers Plus, (800) 433-1216, for laser labels and good, inexpensive disks. We used to use MEI Micro Center for disks, but the disks from Computers Plus are better quality (far less failure rate) and cheaper!

Once the printer is done with the magazine, I send copies to the advertisers. The Canadian and foreign clubs get their issues sent to them in one big bundle. This means creating shipping invoices, which I do in PageStream.

All Canadian and foreign subscriber issues, as well as First Class US suscriber issues, have to be stuffed into envelopes and sent out. We currently have about 40 overseas subscribers, not counting the participating clubs outside the US. Tracker/ST keeps independent track of our non-US clubs and subscribers.

It Never Ends

By this time, we're about ready to start the whole cycle over again! There are times when work from one issue overlaps into the work cycle of the next issue. That is especially true when we have a show to attend, or when one of us is late in completing a task.



Our "helpers," Rumpole (left) and Wimsey

There is a lot of flexibility in our schedule, mostly because we work from home. There is an apt saying I heard in CompuServe's Home Office Forum that goes, "It doesn't matter whether you work the first half or the last half of the day, as long as you get your 12 hours in!"

Bill and I are usually up until midnight (later if it's magazine production time) and, in the morning, I refuse to answer the phone before 9 AM! So, if you're an early riser and give us a call, you're likely to get the answering machine!

Over all this, we try to keep active on CompuServe and answer email on GEnie and our own BBS. We have used Flash (Antic) for ages and haven't found a reason to switch to another telecommunication package, although Bill tells me he's very impressed with STalker 3 (Gribnif Software).

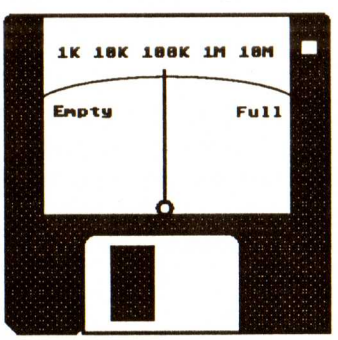
We use the online services to get information about coming products from developers and just to gab with people. Bill and I are often found in the Thursday Night Conference on CompuServe in the AtariArts Forum (GO ATARIARTS) and the Sunday Night CO in the Atari 8-bit Forum (GO ATARI8). On GEnie, we pop into the Gadgets COon Tuesday nights.

Miscellaneous Software

We use a lot of software that doesn't directly apply to publishing AIM. Bill, for instance, likes to play with spreadsheets in LDW Power. We also use commercial utilities like DC SEA and DC Xtract (Double Click Software), MultiDesk and CodeCopy (CodeHead Software), Quick ST and Quick Label (Branch Always Software) and MultiGEM (Rimik Enterprises). I would be remiss if I didn't mention using our Joppa FaxModem and software to send faxes.

PD or Shareware utilities that are also a part of our everyday life include Little Green File Selector, ArcShell and DeskManager (Charles Johnson); Calendar and WhatIs (Bill Aycock); and AUTO folder virus protection programs Vector Checker, Watcher and Vaccine (part of the Hospital package from the UK, available on the March '90 AIM ST disk of the month).

Don't buy another hard disk!



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Organizing Your 8-bit Disk Collection

John Kasupski (WNYAUG)

If you are a veteran Atari user, chances are good that you already have an extensive collection of 5-1/4" floppy disks, all loaded with various programs, games, text files, utilities, picture files, music files and every other kind of program and file imaginable.

If you are a new Atari user, rest assured that eventually, you, too, will accumulate such a collection, especially if you have a modem and frequently download files from local BBSes.

For old and new Atari owners alike, unless your collection is well organized, sooner or later you will have problems finding what you are looking for among all the various disks in your software library. A well-organized library means that you spend less time looking for things and more time being productive or gaining enjoyment from your Atari.

This article will offer some good suggestions on how to maintain a well organized diskette collection.

Apples and Oranges

The first key to organizing your software collection is to organize your disks so that related files are kept together. This basically means keeping apples together with apples, oranges together with oranges, and so on.

For example, if you have a large collection of game files, you should have several disks in your collection that have nothing but game files on them, except maybe DOS and a menu program that will load the game you want. Keep all of your game disks together as well (partitionable disk filer boxes lend themselves to this purpose).

You can further subdivide your game category, if desired, for example, by arcade games, adventure games, space games, PacMan type maze games, etc.

Alternatively, you could break them down according to language: BASIC games, Machine Language Games, and so on. The specific way you break things down isn't important. What is important is that you have some kind of system that you understand and are comfortable with, one that will help you keep things separated and organized.

The advantage here is that if all your games are in one place, when the time comes that you are looking for a particular game, you will only have to look through your games disks to find it. You don't have to also look through your word processor text files, database files, utilities disks, and everything else, because you'll know the games aren't in there!

What's in a Name?

Once you get all your apples onto apples disks and all your oranges onto oranges disks, you may want to take a look at the extensions on your filenames.

I run into a lot of files on other people's disks that have totally illogical filename extensions left on them. A file gets downloaded as "StarGame.1NN" and it stays that way forever. The problem here is that three months later, you probably won't remember whether it's BASIC, object code, a text file, a scrunched disk or something else.

The way to eliminate this problem is twofold. First of all, I have yet to see a DOS that didn't allow the user to rename a file. So, change your extensions to something that make sense. Some commonly used filename extensions and their meanings are listed below:

.BAS—SAVEd BASIC programs
.LST—LISTed BASIC programs or routines
.EXE—An EXEcutable machine language program
.OBJ—Machine language object code
.TXT—A text file
.DOC—Also a text file, but .DOC denotes that the text provides documentation for some other file or program on a disk
.COM—Executable machine language files (like .EXE). Certain types of DOS (especially command-driven ones like SpartaDOS, OS/A+ and DOS XL) will load and execute .COM files when the user types the filename without the extension. Can also represent external DOS commands in a command-driven DOS
.DAT—Data files, as for a database, etc.
.AMS—Song files for the AMS music player program
.PIC—Graphics picture file

You could devise a system of extensions for filenames, but if everybody used the same conventions, it would eliminate a lot of confusion when people exchange files with one another.

The second part of the solution is what to do with all the files you already have that you no longer

The second part of the solution is what to do with all the files you already have that you no longer remember the nature of. How do you tell whether that file you downloaded six months ago is a BASIC program, a text file, a machine language file, or data from some database program on yet another disk?

The answer to this problem is to use the WHATIS utility (also available for the ST/TT computers). This program, written by CompuServe sysop Bill Aycock, recognizes common "file signatures" such as the $FF $FF file header at the beginning of machine language files, then reports to you on the results. So, you get "StarGame.1NN is Object Code" and you at least know how to run the program to see what it is.

WHATIS also recognizes SAVEd and LISTed BASIC files, picture files, text files and files produced by a number of file compression utilities, among others.

Judged by Its Cover

Maybe you can't judge a book by its cover, but you can judge a diskette by its label, provided that you develop the habit of clearly labeling your disks with such vital information as what DOS is on the disk, what density it is formatted in and what type of files are on the disk.

There is a public domain utility, written in BASIC, which dumps the directory listing of a disk onto one or more standard 3-1/2"x15/16" mailing labels such as Avery #4253 or similar. This lets you see at a glance exactly what files are on a disk, saving you the time and trouble of repeatedly swapping disks and typing DIR or A-[RETURN]-[RETURN] or whatever method your DOS uses to obtain a disk directory for one disk after another until you finally locate the file you're looking for.

I use the labeling method myself, particularly on games and utilities disks, and I find it saves incredible amounts of time and spares me the frustration of being in the familiar situation, "I know it's on *one* of these disks, but *which* one?"

Backups and Hard Copy

Finally, you should always back up anything that is really important to some other media. If you have a hard drive, back up to floppies using HardBack or some similar utility. If you use floppies exclusively, you may want to use one of the many file/disk compression utilities, such as Disk Communicator, Disk Masher, the SpartaDOS SCOPY.COM utility or a similar program.

These utilities basically take an image of a full diskette side and save it to a file on another disk. Several of these disk images can be saved to one disk, providing you with a backup source for important data and/or programs. If anything happens to your working copy, you simply Un-Mash, Un-DiskComm, or whatever, putting the disk image back onto a full disk side, thus restoring your important material.

Hard copy is another valuable means of backing up data, and it is also a valuable means of helping to organize your software library.

Several disk library utilities exist which let you create a disk file and/or hard copy (printed out on paper) catalogue of your software collection. Hard drive users who back up to floppies and keep a hard copy of important data as well, will probably almost never lose data.

In Sum

A well organized collection of clearly labeled disks is a must for serious use of your Atari. Even if you just play games on your Atari, a good system for organizing your files will make it easier for you to enjoy your computer's capabilities by making it easy for you to find what you want, when you want to find it.

I hope everyone will gain something from the suggestions in this article, whether it's better productivity, more enjoyment from your computer system, or just a better understanding of how filename extensions can make things simpler for computer users.

The ATARI XL/XE Commercial Software Drought is OVER !!!

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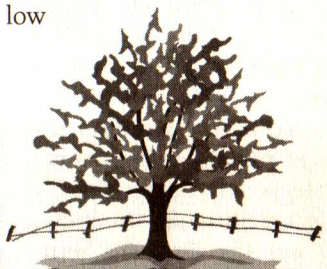

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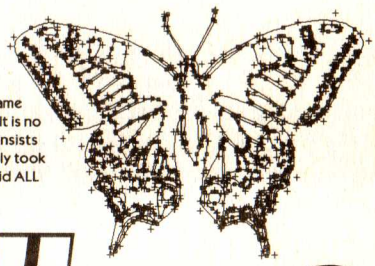
OakSprings Software

This small butterfly is unremarkable. The others are a new species you can breed on your Atari computer.

To the left is a pixel-based .IMG picture. In other words, the picture is made up of dots. It's a 58k file. The image can't be enlarged much more than this without the ragged edges showing. (In fact, they're showing already.)



To the right is a snapshot of the same image after it has been vectored. It is no longer made up of dots. It now consists of lines and bézier curves. This only took a few minutes and Avant Vector did ALL the work for you.

Automatic vectoring has arrived.

Avant Vector is a cutting-edge graphics tool that's fast, easy to use and surprisingly versatile.

The large butterfly wing on the right is a vector image created by Avant Vector. Using "automatic tracing," a bit image graphic (the smaller butterfly) was converted to a vector graphic, resulting in the smooth output you see here.

Vector graphics have big advantages over bit image graphics - they make much smaller files, and they can be scaled to any size without losing resolution or looking blocky. And Avant Vector's tracing routines are highly sophisticated; in a recent review of 7 Mac, PC, and ST auto-tracing programs, Avant Vector was rated best of the bunch! This means there's less editing after tracing an image, and you get more work done in a shorter time.

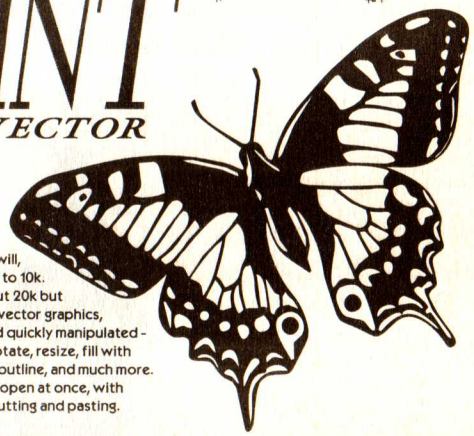
Avant Vector supports .PI3, .PC3, .IMG, .BLD, .PIC or .PAC formats. You can trace Mac, PC or Amiga graphics, in .TIF, .IMG or .IFF formats. The plotter version (Avant Plot) can also load and save HP plotter files.

No matter which DTP package you use, Avant Vector is a wonderful companion. It creates .CVG files for Outline, Calamus or Repro Studio. And .GEM files for use in programs that support GEM3 metafiles. Avant Plot allows EPS importing and exporting, and a full range of professional plotting, drawing and cutting options.

Since Avant Vector is a full featured vector graphics package, you can touch up any picture you've auto-traced, or draw pictures from scratch - with an intuitive, speedy interface you'll learn in a matter of minutes!

Call or write CodeHead Software for more information about Avant Vector (and its amazing cousin, Repro Studio). Special introductory pricing is available until December 31, 1991. Act now and save!

AVANT VECTOR



This is the .CVG vector version: it can now be enlarged or reduced at will, and the file size is down to 10k. The .GEM version is about 20k but otherwise identical. As vector graphics, the images are easily and quickly manipulated - you can stretch, skew, rotate, resize, fill with gray scale percentages, outline, and much more. Up to 7 windows can be open at once, with clipboard features for cutting and pasting.

CODEHEAD SOFTWARE

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These are just a small sample of the EPS clip art drawings available from Computer Safari. These are from Volume 1 of the Clipables collection of over 600 EPS images.

Volume 1 contains images placed into several categories. Categories include: Animals, Business, Dingbats, Display Banners, Famous People, Holidays and Humor.

Clipables can be purchased from Computer Safari, 606 W. Cross, Woodland, CA, 95659 or phone (916) 666-1813.

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MegaType is probably best know for their font conversion (FontVerter) and font creation (Font Designer) software.

The company is also an excellent source for superb quality fonts. Each MegaType Faces Font Pak will be a welcome addition to any DTPer's font collection.

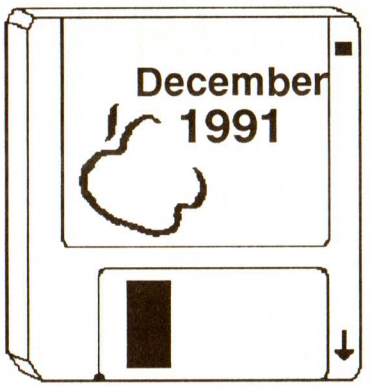
MegaType's Font Paks each contain Calamus, PageStream and Type 1 font formats on the same disk.

Fonts for Calamus are compatible with all versions up to and including 1.09N.

PageStream font versions include all files for compatibility with PageStream versions 1.8x or 2.1.

Adobe Type 1 format files come complete with font outlines, Adobe font metrics and metric files for Windows 3.0 with Type Manager (for use on an IBM with Windows or Corel Draw).

For more information or to order Faces Font Paks, contact MegaType, PO Box 645, South Bend, IN 46624, (219) 288–7468.



AIM Mac/Spectre Disk of the Month

Each AIM Mac/Spectre Disk of the Month is a double-sided disk packed with some of the best PD and Shareware programs available each month. The disks are available in either Macintosh or Spectre formats. All files are self-extracting archives. Just double click to extract!

Here is a short description of the files contained on the December '91 Disk of the Month:

Acey-Ducey 1.01—A simple but fun card game in which you bet on whether or not your "down" card falls between to two "up" cards. BS Shareware's first Mac programming venture.

Alpha 4.01—Alpha is a powerful text editor particularly suited for program editing, but it can be used for any text editing/creation purposes. Alpha allows user-defined macros, user-defined external commands and a plethora of other handy text editing features.

AutoMenus 5.3—AutoMenus 5.3 is the latest and greatest version of this fantastic utility. AutoMenus can automatically pull your menus down as well as dismiss them.

Bart EPS—Two EPS graphics of Bart Simpson (that guy is everywhere!) for use with PICTuresque (elsewhere on this disk). Most DTP packages and some word processors can use EPS graphics. One of these graphics is a full figure drawing , while the other is the "classic" slingshot pose.

Conquest—A two to four player game in which the players attempt to gain control of a system of twenty planets through the use of force and strategy.

Escapade 1.3—Escapade is a control panel extension that allows you to use the keyboard to select buttons in dialog boxes. Shareware.

MF Menu+—MFMenu+ is an INIT that adds a MultiFinder Application Switching menu to the MF icon in the menu bar so you don't have to go to the bottom of the Apple menu on Macs not running System 7.

Mouse Odometer—Mouse Odometer is an application that, under MultiFinder, displays and continuously updates how far (in miles) you have moved your mouse. Includes an INIT that lets you use it without MultiFinder. Shareware.

PICTuresque—PICTuresque is a Desk Accessory that displays MacPaint, PICT and EPS graphics. It can also copy these formats to the clipboard as a PICT file. This is very handy for EPS-hostile word processors because all the EPS information in retained. Clean interface, good color support. Shareware by Tim Herzog.

ProWheel—A proportion (photo) wheel as a desk accessory! Available from within any application program like DTP and illustration programs. Versions for both Sys 7 and earlier are included. If you do a lot of graphics work. DTP or photographic resizing, this is a "must have." Shareware.

Text Mangler 1.2—Version 1.2 of the 'nonsense processor' which uses Markov chaining as described in Scientific American June 1989 and Jan. 1990. Input a text file and TextMangler will create new 'mangled' text based on a statistical analysis of the original. The results can be hilarious! Shareware.

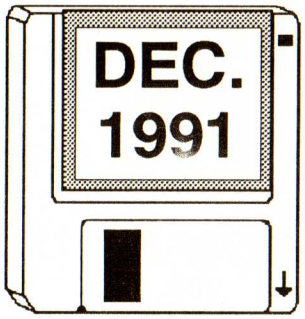
TypeIt4Me 3.0—TypeIt4Me is a nifty INIT that essentially adds a glossary function to any and every program. You can even use it in modal dialog boxes. Just type in a 1 or 2 letter code and TypeIt4Me expands it up to a full paragraph! Great for writers! Requires System 4.1 or later.

Ultra 1.3—Ultra sorts plain text files (created on a Macintosh) by any position in the line. Great for sorting and resorting lists.

Readers can purchase this disk by sending $6 ($5+$1 s/h) to Unicorn Publications, 3487 Braeburn Circle, Ann Arbor, MI 48108. Please specify the Dec. '91 Mac/Spectre Disk and which format when ordering.

AIM

ST/Mega Disk of the Month



All files on this disk are self-extracting LZH archives created with Double Click's Self-Extracting ARC program DC SEA! To use these programs, simply double click the files. Then, click on Extract and select the drive/folder to which you want the extracted files saved. Click on Verbose to get a list of the files in each archive or Exit to abort.

Here's a short description of the files on the Dec. '91 disk. For complete docs, see the text files contained in most of these archives.

ALICE.APP—ALICE, Another LIttle C Editor, comes to us from Ralf Kaufmann in Germany. This easy to use editor supports multiple GEM windows, search/replace, cut/paste and mouse editing functions. Source code is available from the author.

FLEABYTE.APP—This package consists of two primary desk accessories, along with GFA Basic source code and libraries. "Fleabyte\DT" is a calculator that can handle basic math, uncertainties in data derived from measurements, chemical equations and more. "The Wormhole" permits rapid calculation of columns or rows of numbers (including tabulated data) directly in a word processor's window! Now, you can turn your word processor into a simple spreadsheet. Versions of The Wormhole calibrated for 1ST Word Plus and WordUp are included, as well as a calibration accessory. Programs submitted to AIM by the author, Henry K. van Eyken of Quebec, Canada.

HAYAIDEM.APP—Demo of the Hayai file backup program from Machine Specific Software. Hayai is specifically designed for speedy backups from one hard drive/partition to another and is of special interest to SyQuest owners.

The remaining programs on this disk were all submitted to AIM by the author, Andy Osborne in the UK. Many of these programs deal with Astrology and horoscopes. For a detailed list of Andy's many other PD and Shareware programs, see the PD_LIST file on this disk.

CHINESE.APP—This program gives you your Chinese animal horoscope, based on the animal symbol under which you were born. Low resolution color only. Written in STOS Basic. Runs on STEs, Megas and STs—not TT or Mega/STE compatible.

DOMINOES.APP—Fortune telling program using standard dominoes. You choose three dominoes and your fortune is revealed. Low resolution color only. Written in STOS Basic. Runs on STEs, Megas and STs—not TT or Mega STE compatible.

FORECAST.APP—Astrology forecasting program. Gives detailed three month at a time long range astrology forecasts of your future. Runs in ST medium or high resolution on all machines, including Mega/STE and TT.

HARMONIC.APP—Calculates Astrological charts and their Harmonics. Extremely useful for Astrologers; baffling for anyone else...! Runs in ST medium or high resolution on all machines, including Mega/STE and TT.

HORO_ACC.APP—Desk accessory that generates horoscopes based on your date, place and time of birth, etc. Works in ST medium or high resolution on all machines.

I_CHING.APP—From six throws of three coins, an I Ching hexagram and associated reading are given. Low resolution color only. Written in STOS Basic. Runs on STEs, Megas and STs—not TT or Mega STE compatible.

NAMEDROP.APP—Expandable database of over 1000 first names and their meanings. Ever wonder what your first name means and where it originated? Chances are, your name is already in this database! Runs in ST medium or high resolution on all machines.

PD_LIST.APP—Listing of the many PD, Shareware and Licenseware programs available from Andy Osborne.

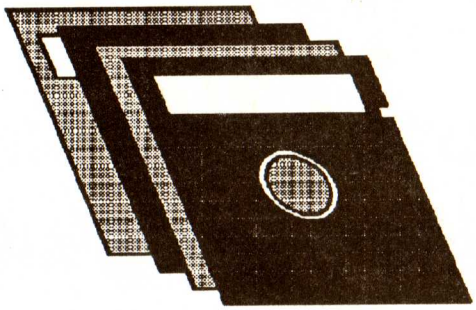
PLACES.APP—Expandable database of meanings of British placenames. Includes a 600-word dictionary of Anglo-Saxon, Gaelic, Norse and other elements, so any unknown towns can be tackled, with the meaning intelligently guessed at by the program.

RHYTHMS.APP—Based on your date of birth, this program calculates your Biorhythmic. Unlike most other Biorhythms programs, not only a graph is output, but also a chart and actual textual interpretation. Some compatability analysis is also included. This demo is limited to years up to and including 1991.

SETUP.APP—A small program that sits in the AUTO folder and reads the system date at boot up. If the date is less than 1-1-1991, another small Time/Date set program is executed.

Readers can purchase this disk from their local AIM Participating user group or by sending $6 ($5 + $1 S/H) to Unicorn Publications, 3487 Braeburn Circle, Ann Arbor, MI 48108. Please specify the December '91 ST disk when ordering.

AIM 8-bit Disk of the Month December 1991



Side 1 of the December '91 AIM 8-bit Disk of the Month was produced exclusively for ATARI Interface Magazine by *Software Infinity* and the Nittany ATARI Personal Computer Organization of State College, Pennsylvania.

Boot this side of the disk with BASIC to use the file loader/text viewer. Boot without BASIC to go directly to DOS.

NOTE: You cannot use the file loader to use the ARC files on this disk. You must unARC these files to another diskette using Super UnARC from Bob Puff. Super UnARC appeared on the April/May '91 AIM 8-bit Disk of the Month.

This side contains:

MENUPIC.BAS—Autoloads the SILOGO.PIC upon bootup.

SILOGO.PIC—The SOFTWARE INFINITY Picture-Logo, which autoruns MENU.

MENU— SI's custom MENU. Loads Binary and BASIC files, plus reads Documentation and Text files with onscreen prompts.

TIDIER3.ARC—TEXT TIDIER Version 3.2, by Greg Maguire of NAPCO. Strips word-processor editing commands from your downloaded or uploadable (AT)ASCII text files and much, much more—in record time!

KESDEM2B.ARC—Public Domain demos of four of KE-SOFT's NEW GAMES for the ATARI XL/XE—will whet your appetite for the Commercial versions! UnARC this file to a blank formatted disk!

TECHNO NINJA and **OBLITROID**—Six screen "snapshots," three from each game. Just sit back and enjoy these two "slide shows."

CULTIVATION demo—Use your joystick and trigger (hold down) to select and pull each block one at a time.

ZEBU-LAND Teaser—Utilize joystick and trigger to choose and move each brother separately, in turn.

Remember to briefly hold down the OPTION key on your XL/XE as you boot the UnARChived KE-SOFT DEMOS Disk you've created.

Consult *Software Infinity's* Advertisement in current or recent issues of AIM for additional background info on these four KE-SOFT GAMES.

Side 2 of the December '91 AIM 8-bit Disk of the Month contains:

AMIGAPIC.ARC—Demo of the capabilities of EscalPaint for the XL/XE. EscalPaint is a paint program that uses 256 colors out of 25456, supports joystick, KoalaPad, etc. and lots more. This ARC contains five sample EscalPaint pictures converted from the Amiga. UnARC to an empty floppy (this fills an entire SD disk!). Once unARCed, turn off your computer and reboot to start the demo. Press SELECT to move from picture to picture.

CARGOSHP.ARC—Jack's Cargoship is a Battleship type game in which you must sink the competition's fleet of ships carrying/protecting a DRAM shipment. Play against a friend or the computer, or let the computer play against itself! Features day, evening and night play. Written by Paul Alhart of the Atari Federation club and author of AIM's A-T-A-R-I columns. SAVEd BASIC, docs included.

DB20X.ARC—An external doors/outboard command file to add an online database to AtariLink BBS 2.0x. AtariLink was featured on the November '91 8-bit Disk.

SEARCHII.ARC—A flexible general purpose data base program that's very easy to use. Supports variable length records/fields, and several machine language subroutines provide quick search capabilities. SAVEd BASIC. Written by Paul Alhart.

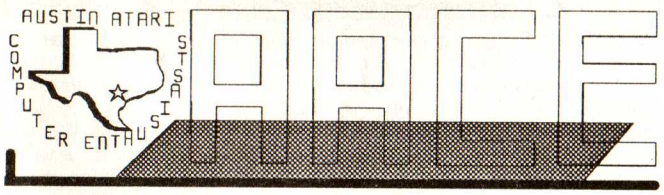
Readers can purchase this disk from their local AIM participating user group or by sending $6 ($5 + $1 S/H) to Unicorn Publications, 3487 Braeburn Circle, Ann Arbor, MI 48108. Please specify the December '91 8-bit disk when ordering.

Alamo Area Atari User Association (AAAUA), P.O. Box 79-1426, San Antonio, TX 78279-1426

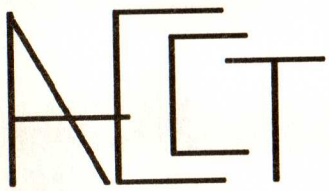
The Alamo Area Atari User Association (AAAUA) is an Atari 8-bit user group serving primarily the greater San Antonio area. General Membership meetings are held on the first Tuesday of each month at the Balcones Heights Community Center, 107 Glenarm, San Antonio, from 6:30 to 9:30 PM. Each third meeting we have a swap meet and computer workshop in lieu of the informal presentation. AAAUA maintains a Library of about 700 disk titles. Each month we publish (FR)ANTIC covering happenings of local interest as well as other topics, both technical and non-technical. Members also receive a subscription to AIM as part of their member benefits. Dues for family membership are $24 per year or $15 for six months. Dues for Subscribing membership are $15 per year domestic and $18 per year for most foreign countries. For further information write AAAUA at the above address or call Al Sherrill, President, at (512) 492-6633, or Thelma Sunvison, Executive Assistant, at (512) 344-3522.

President Richard M. Houser (505) 299-3977

General membership AACE members meet twice monthly, on the first Saturday and third Tuesday of each month. An 8bit meeting is held on the second Tuesday of each month. On the first Saturday of June and December, a Swap Meet is held. Dues are $20 a year payable in January. Members receive an AIM subscription, access to our 16bit and 8bit PD library and membership in the ASTRO BBS (505) 260-0448 Club membership is at an all-time high of 36.



AACE, 305 Meadowcreek Dr., Round Rock, TX 78664



ACCT meets on the second Monday of the month, from 7-9 pm at Bassett's Health Foods, 3301 W. Central Ave (Westgate Shopping Center), Toledo, OH. ST Sig held monthly at the home of David and Brenda Micka. Dates and times announced at meeting. ACCT may be contacted at 4487 289th, Toledo, OH 42611 or by calling Dave Micka at (419) 729-1891 or Michael Justice at (419) 242-7797.

President David Micka (419) 729-1891
Disk Drive-Thru BBS (419) 885-3441

The Atari Clubs of Denver is an umbrella group consisting of: Atari Club of Denver, Starfleet User Group and the ST Interest Group. Atari Club of Denver meets the first Tuesday of each month. We meet at the Aurora Public Library 14949 E. Alameda Avenue in Aurora, Colorado. The meeting starts at 7:00 PM. Starfleet User Group meets the second Friday of each month. We meet at Pamona High School 8101 West Pamona Drive in Arvada, Colorado. The meeting starts at 7:00 PM.

Atari Club and Starfleet provide support for Atari 8-bit owners.

ST Interest Group meets the third Tuesday of each month. We meet at the Aurora Public Library 14949 E. Alameda Avenue in Aurora, Colorado. The meeting starts at 7PM. The ST Interest Group provides support for the entire ST computer line.

Our address is: Atari Clubs of Denver POBox 24064 Denver, CO 80224. For additional information call our BBS at (303) 343-2956, 24 hours, 300-2400 BPS.

Membership to ACCEPT is $20 a year. A membership in ACCEPT will get you the magazine your holding for an entire year, discounts at Jenkins' Computers and on various ST publications. Technical help, and access to one of the largest PD libraries in the US are also thrown in for good measure. Special access to the STE-EP BBS, an ACCEPT members BBS is also a privilege of membership. Make checks payable to: ACCEPT, 245 Longhorn Crt, El Paso, TX 79907.

BBS support for ACCEPT: STEP El Paso: 915-755-STEP STEEP BBS El Paso: 915-821-9220

ACCESS

Atari Computer Club

Encompassing Suburban Sacramento

Bob Drews (916) 423-1573 President

ACCESS — The Atari Computer Club Encompassing Suburban Sacramento. As usual, please call any officer if you need information, directions or even to make a suggestion. Or, you can call the ACCESS BBS at (916) 428-8662. Address: PO Box 1354, Sacramento, CA 95812

Our general meeting is at 7:30 PM on the first Wednesday of each month in Classroom B of the SMUD training building at 1708 59th St, between Folsom Blvd and R Street, just off Highway 50. This is our main get-together.

Atari Computer Owners Resource Network
Fort Wayne, Indiana

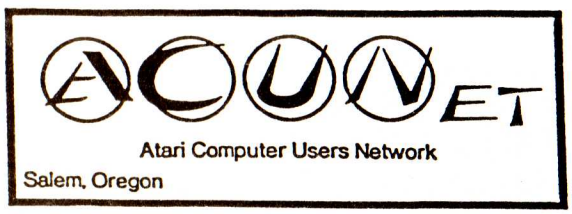
ACORN, the Fort Wayne area Atari users group, meets at the Georgetown branch of the Allen County Public Library on the first Saturday of each month beginning on at 10 AM. Annual membership dues are $18. Call our BBS at (219) 744-1396 for more information or write to us at ACORN c/o Ken Helms, 3627 Iowa Court, Fort Wayne, IN 46815.

The Atari Computer Owners of Rochester, NY (ACORN) meets on the 2nd Wednesday of each month at Brighton High School, 1150 Winton Road South. An ST Beginner's class starts at 6:45, while our 8-bit 'Basically Speaking' class starts at 7:00. Our general meeting starts at 7:30pm in room 262S, with a split into ST and 8-bit SIGs at 9pm.

We operate the Dimension's End BBS at (716)436-3078, 300/1200/2400 baud, 40 MB of online PD and shareware files. Membership in ACORN is not required to access the system.

Membership in ACORN is $18 per year, and entitles you to a year's subscription to both the ACORN Kernel newsletter and the Atari Interface Magazine, 12 meetings, access to our 8-bit and ST PD libraries at reduced cost, and special access to our BBS. Our mailing address is: PO Box 24920, Rochester, NY 14624.

President Don Allis (716)293-3415

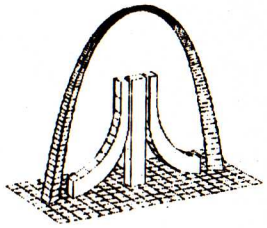


ACUNet is the Atari Computer Users Network in Salem, Oregon. Annual dues are $15 with an AIM subscription and $10 without. Our meetings are held the fourth Tuesday of the month at 7:00 p.m. Call Ron Purdy, ST Co-Chair at (503) 588-7509 for the current meeting location and other information.

Local BBS support includes the Atari SIG on the Salem Public Library BBS - (503) 588-6130, Page BBS - (503) 363-0171, and The Jungle BBS - (503) 393-4274. Want more information about ACUNet? Write to Ron Purdy, 2662 East Nob Hill Drive SE, Salem, OR 97302.

Regular meetings are held at the VAFB Federal Credit Union, Vandenberg Village, Califorina on the first Monday of every month at 7:00 P.M. Dues are $10 for individual or $15 for family membership. The Atari Federation maintains a PD software library for both 8-bit and ST computers.

President Phil Rominger



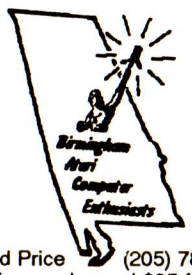
ACE of St. Louis, PO Box 3508, St. Louis, MO 63143, phone (314) 644-7168.

President Dick Pederson

Bay Area Atari Users Group, PO Box 4637, Santa Clara, CA 95054

BBS: (408) 986-0215

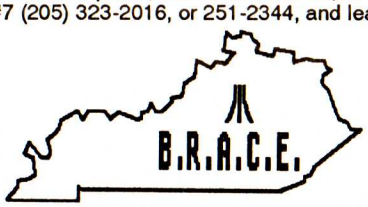
Robert Kaczanowski President



Vice President Todd Price (205) 787-8208

Club dues are $15 for regular and $25 for advanced. Advanced includes an AIM monthly disk, specify ST or 8bit. BACE meets the second Monday of every month at 7pm in the Vestavia Hills Public Library, downstairs.

For membership info, call Alan Brewster, or the Matrix BBS Conference #7 (205) 323-2016, or 251-2344, and leave a message.



B.R.A.C.E. (Bluegrass Region Atari Computer Enthusiasts) meets the third Tuesday of each month from 7:00 P.M. - 9:00 P.M. in Conferrence Room B (located on the 4th floor), of the downtown branch of the Lexington Free Public Library. The current membership dues are $15.00 per year for an individual membership, $20.00 per year for a family membership, and $10.00 per year for an associate membership (an associate membership includes receiveing the monthly newsletter (AIM), but excludes the use of the library).

President Hal Nason (606)269-8989

General Membership Meetings are held on the third Thursday of the month at Erie Community College North Campus, Room S-105 in the Student Center. Setup begins at 7:00 PM; Meeting starts 7:30 PM. The Board of Directors meet on the the first Tuesday of the month at the Your Host Restaurant, Harlem at Sheridan at 7:30 PM. All are welcome to attend. Piracy will not be tolerated at any BRAG ST function.

BRAG ST, PO Box 1035, Buffalo, New York, 14225

Chairman Mark Pierro (716) 691-7844

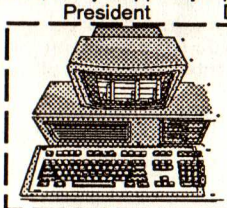
Backscater BBS, Access Code: BOAST (716) 646-1114

COOKEVILLE ATARI COMPUTER ENTHUSIASTS

Cookeville, Tennessee

Cookeville Atari Computer Enthusiasts—c/o Robert Pecora—280 Capshaw Drive—Cookeville, TN 38501—Cookeville A.C.E. meets on the first Saturday of the month at 1:00 p.m. at the Putnam County Library in Cookeville, Tennessee.—Cookeville A.C.E. caters to Atari ST and 8-bit computers and is supported locally by The Generic BBS, Terry Rapp - Sysop.—C.A.C.E.

President Dan Hale (615) 526-8002



CDACC

CENTRAL DELAWARE ATARI COMPUTER CLUB

Sec/Treas Tom Baldwin 302-678-9411

Central Connecticut Computer Club

Meetings of the CCCC are on the third Wednesday of each month. The meets kick off at 7:30 and usually include presentations or demos of various hardware or software items. The meetings are held at 127 Pinnacle Rd., Bristol, Ct. 06010

Prospective members may call Rich Scheidel (203)589-3738 or call Gary Jones (203)225-4611, or write, CCCC, 127 Pinnacle Rd., Bristol,Ct. 06010.

Dues are $25 per year,$30 for families. Includes Voting membership, Atari Interface magazine, access to Club library (8-bit and ST) and access to the Club magazine library.

CDACE

Capital District ATARI Computer Enthusiasts

The Capital District Atari Computer Enthusiasts was founded in 1981, is located in Albany, N.Y. and serves Albany, Schenectady, Rensselaer, Saratoga and surrounding counties in upstate New York. XL/XE meetings are currently held four times a year on a quarterly basis and ST meetings on the last Wednesday of the month. CDACE meetings are held at the Computer Cellar, located in Westgate Plaza, Albany, N.Y.

The club has extensive public domain libraries for both computers which are available to members beginning at 6:30 PM on meeting nights. ST disks are priced at $2 while the XE library continues to remain free to all members.

Dues are currently $20 per year for each family. This includes a subscription to AIM magazine, full access to the club BBS, and our monthly newsletter.

President Bob Thompson 518-439-5356

C.O.A.C.

Central Oregon Atari Club

Dedicated to Central Oregon Atari Users and Enthusiasts Since 1986

President Bob Stiles (503)389-5206

Address: P.O. BOX 6824, BEND, OR 97708

Our membership dues are $20/Yr for new members, $17/Yr for renewals. $1/Yr for each additional family member. We meet the FIRST SATURDAY of the month at 5:00 PM at the Ann Rita Conference Center, which lies just in front of the St. Charles Hospital on Neff Rd.

CRAG Calumet Region Atari Group

CRAG—Calumet Region Atari Group, PO Box 10995 Merrillville, IN 46411, is a club for users of the Atari ST, STE, and Mega ST computers. CRAG meets on the second Wednesday of every month at Broadway Music, which is located in Greentree Plaza, at 1509 W 81st (US 30), Merrillville, IN. Meetings begin at 7PM.

Membership in GRAG is open to anyone. Dues are $15 a year and entitle you to a subscription to Atari Interface magazine, as well as discounted prices on CRAG's Public Domain/Shareware library disks. Library disks are double sided. Cost per dis is $2.50 for members, $4 for non-members. For more information call:

Jeff Coe (219) 663-5117

CUSTUG Champaign-Urbana ST Users Group

The Champaign-Urbana ST Users Group (CUSTUG) meets at 7pm on the second Wednesday of each month in the Auditorium of the Urbana Free Library at the corner of Elm and Race in Urbana, IL. Membership dues include a subscription to AIM and GLITCH and use of the commercial lending library. New members are welcome. The group supports a local BBS, Blackhawk's Keep, operating 24 hours a day at 3/12/2400 baud (1/8/N): 217-892-5512.

Henry Murphy President

CUSTUG PO BOX 3442 Champaign, IL 61826-3442

Cuyahoga Valley Atari Computer Club

C.V.A.C.C.

ATARI

The Cuyahoga Valley Atari Computer Club (C.V.A.C.C.), P.O. Box 9173, Akron, OH 44305-0173

Dues are $20.00 per year and will entitle members to all club benefits and activities. Each membership includes our monthly newsletter, The Password, as well as a subscription to Atari Interface Magazine. Members also receive a membership card which, when displayed at participating local computer stores, will entitle its bearer to discounted prices.

Meetings are held on the second and fourth Tuesdays of each month at 7:30pm in the basement of the First National Bank in Mogadore, Ohio.

President Don Crano (216) 376-7618

Eastside Atari Users Group

The Eastside Atari User Group, (EAUG), meets on the first Monday of every month, 7PM, at the Alton Square Mall Community Room, in Alton Il. All meetings are open to the public. No club dues. PD library, club newsletter EAUG-Log, newsletter membership $18 per year. Member of the Midwest Atari Regional Council, MARC.

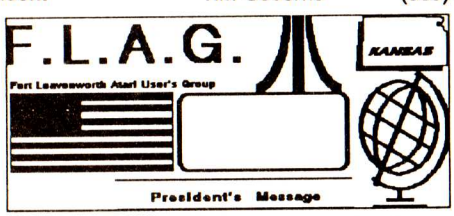
Eastside BBS 618-254-6077 and Garage BBS 618-344-8466. EAUG's address is 2425 Crislisa Dr, Alton, Il. Call 618-465-0342 for EAUG information.

FACCS

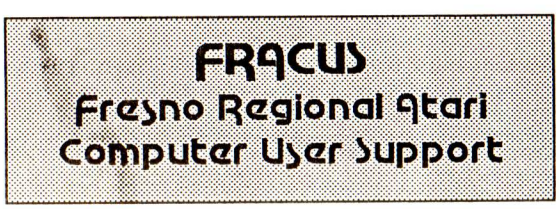
We hold our meetings the second Thursday of each month, at Eager Beaver Computers, located next to the Garland Theater. Meetings start 7PM. All visitors are welcome, so come check us out.

With the $15 per year family membership, you will receive our club's newsletter (AIM) as well as access to our PD library. Since we currently have renewal dates scattered throughout the year, please check your card for your expiration date. To prevent any interruption in services please renew by the expiration date on your card. For more information contact any of the officers or write to FACCS, PO Box 5121, Spokane, Wa. 99205

President Tim Osborne (509) 624-1917



President Jeff Yoe (913) 682-2883



President Tom Hancock (209) 885-2817

The FRACUS user group meets the last Saturday each month, at 6PM, at the Four Seasons Moble Home Park Rec. room in Fresno, CA. We have a large public domain library with over 400 programs. The club also has a 24hour BBS. All 8bit Atari users are welcome to our meetings and to use our BBS (members have an additional sig on the BBS). Dues are currently $20 annually or $5 quarterly which includes a subscription to AIM and issues of our periodically published newsletter.

GRASS meets the first Wednesday of every month at the Wyoming Public Library, 3350 Michael S.W.. Doors open at 6:30, meeting starts at 7:00pm. Dues are $22.00/yr. including AIM. Bring in one PD software disk and get 2 blank disks for your time.

Tim Feenstra President (616)249-9742

Meetings are held the first Tuesday of each month at a location announced in the previous meeting.

At present our dues are $24 per year (Our year begins in September.) and is pro-rated at $2 per month for new members the first year. We support all facets of Atari computing from 8-bit to Spectre/Mac to IBM and MIDI.

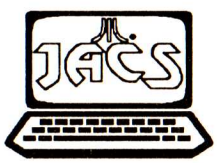
President Carl Neblett (409)755-6535
BBS Number (409)722-6526

The Houston Atari Computer Enthusiasts meet on the fourth Wednesday of the month, 6:45pm at the Health Economics Corporation, 2400 West Loop South, in Houston, Texas. The club supports all Atari computers from the 400 to the Mega4.

Membership is $22 per year, and gives full access to our BBS (713) 458-9923, access to our disk, magazine and newsletter libraries, a subscription to AIM, and our local news journal UPDATE ATARI. There are also other benefits, such as store discounts, door prizes, workshops, telephone help when you have problems, and much more! For more information, please contact one of our officers or drop us a line!

HACE, P.O.Box 460212, Houston, TX 77056

President: Bill Kithas 713-855-0815



Jersey Atari Computer Society, P.O. Box 710, Clementon, NJ 08021 BBS: (609) 346-1224.

The regular JACS meeting is usually held on the third Tuesday of each month, at the Camden County Library from 7 to 9 PM. The regular monthly meeting includes topics of interest for users of all Atari 8-bit & 16/32-bit computers. Yearly membership dues (August, 1990 - July, 1991) are $24. As a JACS member, you'll receive a subscription to Between Bytes and AIM, and full access to our 24-hour bulletin board. Copies of AtariUser are available at the meetings.

JACS public domain disk libraries (for all Atari computers) includes over 200 disks. Send a stamped, self-addressed business size envelope to receive a copy of our current disk catalog - please specify 8-bit or ST!

Pres & BBS Sysop Mike Hopkins 783-1423

The Kent Atari Users Group meets on the fourth Tuesday of each month from September thru to May. Meetings are generally held at the North Maple Villiage Mall on #40 Highway just North of Chatham, Ontario.

Our club dues are $20 per year with the opportunity to subscribe to A.I.M. We support both the 8-Bit and ST which gives you access to both an 8-Bit library and an ST library. Disks are $4.00 (Canadian) for the ST and $3.00 for the 8-Bit. Non members, add $1.00 per disk extra.

You can reach us thru the KAUG BBS at (519) 351-3901 anytime, or phone Channel One (519) 351-0760, Monday thru Friday from 10:00am to 9:00pm and Saturdays 10:00am to 6:00pm.

Everyone is Welcome. "Bring a Friend"

Long Island Atari User Group, PO Box 92, Islip, NY 11751. For information, contact John Aalto at 516-589-6754 or call STar Scan BBS at 516-399-4252.

Layton ACE of Utah

The Layton Atari Computer Enthusiasts (L.A.C.E.) membership cost $20 per year. Privileges include the AIM Monthly Magazine, access to the 8-Bit and ST club libraries, monthly meetings, help and friendship. LACE, c/o Irwin Brooks, 3897 So. 2275 W., Roy, UT 84067-3515. The LACE Club Meets in the basement of the Clearfield Library second Wednesday/ month at 7 p.m.

Mike Mormando President (801)731-1516

M.A.C.E.

The Michigan Atari Computer Enthusiasts

Members of MACE receive, as part of their dues, Atari Interface Magazine. 8-Bit disks are $3 each, and ST disks are $4 each. If you purchase three (3) disks from either library you will receive a fourth disk of your choice at absolutely no cost. Non-Members may purchase disks at a slightly higher rate. Mail order is also available. For a catalog of current disks in our libraries, send $2 to: MACE, P.O. Box 2785, Southfield, MI 48037

MACE meetings are held on the Third Tuesday of each month at the Southfield Civic Center at 7:30pm. The Southfield Civic Center is located at 10 1/2 Mile and Evergreen Rd, one half mile south of the Evergreen exit on the new I-696. Meetings are in the small pavilion, room 115.

MID-OHIO ATARI USER GROUP

MAUG meetings have returned to A&B Computers, 1151 Park Avenue West, (West Park Shopping Center) Mansfield Ohio, from 7:00pm until 9:00pm, on the third saturday of each month (except July). If you are unsure on how to get there, call A&B at (419) 529-9999. If you have questions relating to MAUG, call Chuck Steinman at (419) 529-2478 (after 5pm).

ST and 8-bit downloads for MAUG members have returned to the DataQue Support board, so check them out! Included are the most recent AIM ST and 8-bit disks of the month, and other interesting files. Only MAUG members in good standing have access to these files, so make sure your have your dues paid! The DataQue support board runs 24 hours, 300-2400 Baud, and the number is (419) 529-5197. Make sure you indicate you are a MAUG member so that MAUG access will be granted.

Middle Georgia Atari Users Group

M.G.A.U.G.

The Middle GA Atari Users Group is the sole Atari Club in the Middle Georgia area. We are composed of 43 members of which approx. half are ST users. Club president Pete Miller can be reached by phone at 912-328-8758. The MGAUG address is 115 Feagin Mill Rd., Warner Robins, GA 31088. MGAUG meets the second Sunday of each month at 1 PM at the Warner Robins Library. Annual dues are $6 with the newsletter optional. Use of the club library is free to all paid members.

NASAC NORTHMONT Area Systems of ATARI Computers

Northmont Area Systems of Atari Computers, NASAc

Terry Browne President

Nashville Atari User's Group N.A.U.G.

Nashville Atari User's Group P.O. Box 121752 Nashville, TN 37212. NAUG meets on the third Thursday of each month from 7PM to 10PM at the Cumberland Museum and Science Center. Membership dues are $24 per family for the entire year. With your membership you will receive our local newsletter, Atari News, a subscription to Atari Interface Magazine, access to the club's 8-bit & ST Public Domain/Shareware libraries, People joining during or after the month of July pay 1/2 the yearly rate. Visitors are welcome to all meetings.

President & Editor Walt Sullivan (615) 228-7353
The Nashville Exchange (615) 383-0727

O-ACEs

OACSIS covers BOTH 8-bit (including the 400/800, XL, XE, and XEGS series) AND 16-bit (ST series) Atari computers. We meet twice each month (except November and December) on the 2nd and LAST Wednesday each month. Doors open by 7:30 pm at La Vista Recreation Center, 8116 Parkview Blvd. (just off 84th Street, south of Food-4-Less and east of 84th at the light)

FIRST MEETING: (2nd Wednesday) Covers news, views, and decisions that ALL members might be interested in. FOCUS MEETING: (LAST Wednesday) Concentrated information on a single topic (such as word-processing, spreadsheets, music composition, desktop publishing, etc.) Call 592-5427, for more info on O-ACEs!

PAC

Portland Atari Club PO Box 1692, Beaverton, OR 97005
President David Hunt 286-6276
BBS ACE of America 285-4417

PORTS ATARI P.A.C.E. COMPUTER ENTHUSIASTS

President Tracy Hendershot 525-1058

Membership to PACE is $30 ST and $20 8bit per year or $9 per quarter. Meetings are held at 6:30pm on the third Sunday of every month. Membership includes a monthly newsletter, FREE Disk-of-the-Month, FREE printer ribbon re-inking, and FREE copying priveleges to our VAST collection of 8/16 bit Public Domain programs. Any written correspondence should be addressed directly to Ports A.C.E., Tracy Hendershot, 4835 Crosley Avenue, Duluth, MN 55804.

PHAST - Phoenix Area ST

The PHAST monthly meetings are held on the second Saturday of every month at Devry College 2149 W. Dunlap Ave. Phx, Az. from 10 to 12pm in room #101.

Treasurer Wayne Myers (602)264-5737

P3Atari Computer Enthusiasts (P3ACE)

Serving the Colorado Springs, Colorado ATARI community since 1982. PO Box 17779, Colorado Springs, CO 80935

President: Rick Reaser, 380-8082

RJKCC
ROCKFORD ATARI COMPUTER CLUB

Our regular business meeting is held from 9 to noon, the third Saturday of the month.

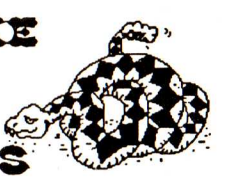
We have accepted the gracious hospitality, of the Springbrook Congregational Churches as an meeting place. It is located off Alpine, just as you make the turn onto Springbrook road, from Spring Creek road. Our mailing address is 3902 15th Avenue 1 - Rockford, IL 61108. Our phone number is [815] 397-5316.

Meetings are held on the fourth Saturday of each month, 2pm, at the Rapid City Public Library. Annual dues are $12 for basic membership and $15 for membership and newsletter (subscription to AIM!).

NO PIRACY WILL BE TOLERATED AT ANY RACE FUNCTION!

President Rick Burton (605)-642-5353

RATTLESNAKE ATARI COMPUTER ENTHUSIASTS



Rattlesnake Atari Computer Enthusiasts, PO Box 364, Frenchtown, MT59834. For more information, call Tom Tucker at (406) 626-4410. RACE meets the 3rd Sunday at Nat'l Guard Armory at 7PM.

R.A.C.E.

President Lewis Midyette 828-4319

S.A.G.E.
SPECTRUM ATARI GROUP of ERIE

SAGE, PO Box 10562, Erie, PA 16514-0562

The Spectrum Atari Group of Erie meets on the third Sunday of each month at 2 PM at St. John's Lutheran Church in Erie, PA. We also have SIG meetings monthly covering Telecomputing, the ST/Mega/TT computers and programming in GFA BASIC.

President Dennis McGuire 814-833-4724

ST Atari League of San Antonio (SALSA), P.O. Box 18731, San Antonio, TX 78218. SALSA is a users group for 16 bit Atari users. Meetings are held on the second Tuesday of each month at the Balcones Heights Community Center, 107 Glenarm, San Antonio, TX, from 7 to 10PM. Membership dues are $20 per year and members receive AIM as well as the option of recieving the clubs newsletter. A one year membership is $15 and includes the clubs newsletter. A subscribing membership is available to those not able to attend meetings and includes the clubs newsletter and all discounts available to normal members. A monthly Disk of the Month is available at each meeting for $2.

President: Kyle Miller 512-945-9469

SCAT SUBURBAN CHICAGO ATARIANS
AN INDEPENDENT COMPUTER USERS GROUP

SCAT general meetings are held on the first Saturday of each month at 10AM, unless otherwize indicated on the SCAT BBS. The location for the meeting is College of Dupage, Student Resource Center, Lambert Road between Roosevelt and butterfield Roads, Glen Ellyn, IL.

Membership dues are $20 per year per family. Membership benefits include subscription to Atari Interface magazine (AIM) and special club events. Anyone wishing to become a member can just come to a meeting and sign up or call SCAT's Bulletin board (708) 231-7227 or write SCAT, P.O. Box 72266, Roselle, IL 60172

San Diego Atari Computer Enthusiasts

General Meetings are the 3rd Monday of each month at the North Park Recreation Center Social Room, 4044 Idaho Street at 7pm. ST/8-bit workshop meetings are on the 1st Thursday of each month at the North Park Adult Center, 2719 Howard Street at 7 pm. All meetings are open to the public.

Annual SDACE subscription dues are $18 which includes increased BBS access, AIM subscription, SDACE newsletter subscription, and reduced rates on the Disk of the Month. SDACE's address is PO Box 900076, San Diego, Ca 92190.

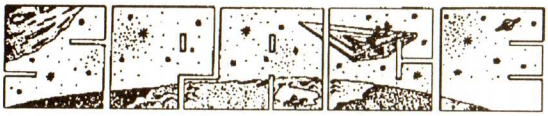
President Michael Bergman (619)558-7866

BBS 24hrs, 300-2400 68MB (619)689-815

SEVAC

South East Valley Atari Connection meets the third Saturday of each month at 10 AM at 3234 S. Fair Ln. (Eaton Business Park, just off of 48th Street and Southern), Tempe, Arizona. Yearly membership is $12.00. Membership includes reduced prices on PD ST and 8-bit libraries and monthly newsletter.

President Marc Dyer (602) 897-0314



SPACE, the Southcentral Pennsylvania Atari Computer Enthusiasts meet on the third monday of the month at the Camp Hill Mall Community Room. The doors open at 7:00 and the meeting begins at 7:30. Dues are $15.00 per year and includes a subscription to AIM and SPACE Probes, our official newsletter.

For more information, call either John Slade, President at (717) 938-3656 or John Hileman, Newsletter Editor at (717) 938-8753 or write to: SPACE, PO Box 11446, Harrisburg, PA 17108.

The Sacramento ST users group supports the ST and TT family of computers and meets on the second Wednesday of every month at the Pac Bell auditorium at 2700 Watt Avenue. The meeting starts at 7p.m. with an informal beginners session with the regular meeting starting at about 7:25.

Dues are $24 a year and membership benefits include, the club's newsletter, full access to the club sponsored bbs, a free raffle ticket at every general meeting, membership disk, access to our extensive disk library for an extremely reasonable rate and a subscription to AIM.

President	Mark Warner	(916)344-8320
ST-KEEP BBS	(916)331-6153	(916)729-2968

The Saginaw/Tri-City Atari User Group meets the second Saturday of the month, at 9 am, at the Rudy Zauel Memorial Library, on the corner of Center and Shattuck in Saginaw Township, Michigan. Upcoming meetings are November 16th and December 14th 1991.

Club dues are still only $20.00, which provides support for both the 8 Bit and ST, and full access to the club's Public Domain library, disks are $3 for a double-sided disk packed full of goodies (2 for $5, what a bargain!). Check your mailing label, if you need to renew, (or haven't joined us yet!). A free PD disk is included with each new membership or renewal! DO IT NOW!

President Bryant LaFreniere (517)835-2234

President Claudette Tischler 226-5644

Membership dues $12 per Year with a one time sign up fee of $13. STANCE club meetings are held every third Monday of each and every month at B & G Electronics, (located at 15729 Madison Ave., Lakewood, Ohio 44107) starting at 7:15PM

STAR
ST ATLANTA ROUNDTABLE

STAR (ST Atlanta Roundtable) Atlanta, Georgia, meets the third Monday of each month at 7PM. Membership dues are $30 per year. Each member receives a copy of AIM and PD disks. Bring a friend.

President Rick Ostapower 404-487-4845

THE #1 ATARI USER GROUP IN THE NEW HAVEN (CT) AREA

President Madelon Wilson (203) 735-6711
15 John St., Ansonia, CT 06401
ST.A.R.R. BBS (203) 421-4861

Membership in ST.A.R.R. includes a one-year subscription to A.I.M. and access to a large public domain library. Membership dues are $20 per year, and membership is open to all interested users. We meet on the third Thursday of each month (except August) at The Greater New Haven State Technical College, 88 Bassett Road, North Haven, CT.

The ST Users Network — supporting users of the Atari ST, Mega, and newer technology Atari computers. Open meetings are held on the 3rd Wednesday of each month at 7P.M. in the Murray High School. Send correspondence to: STUN, P.O. Box 27285, Salt Lake City, Utah 84127.

President	Randy Larsen	(801)967-0209
STUN's BBS "The Bolt"		(801)968-3921

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The WARP 16 accelerator + cache board contains a high speed 68000 CPU that replaces the slower 68000 CPU currently used in your Atari.

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Salinas Valley Atari Computer Enthusiasts

SVACE is the only Atari user group in the Monterey Peninsula area. There is a free disk of the month for all attendants, please bring your own disk. Dues are $12 per year and includes Atari Interface magazine. Meetings are at 7:30 P.M. on the first Tuesday of the month at the Salinas Community Center. Demonstrations and raffles are a regular part of our meetings.

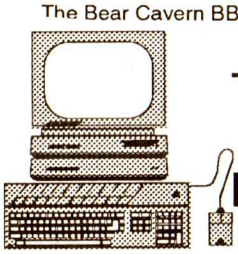
SVACE can be contacted at 672 E. Romie Lane, Salinas, CA 93901. Anybody interested in Atari computers is welcome.

President Gary Klugman (408) 758-4894
BitStream BBS (408) 449-2150

SWAG
Southwest Washington Atari Group

The Southwest Washington Atari Group has been holding its meetings at 6:30 p.m. on the last Sunday of the month (save July) at Clark County Fire District #5, Station 3 on 213 NE 120th, Vancouver, WA. Annual dues are $12 and SWAG can be contacted at PO Box 1515, Vancouver, WA 98668.

Allan Coker President
The Bear Cavern BBS (206) 574-1146



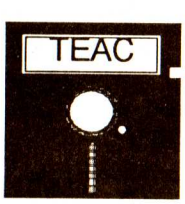
THUNDER BAY ATARI ST ENTHUSIASTS

Yearly membership fee of $25 includes 6 issues of the TEAC newsletter, the TEAC Educational 8-bit Disk Library catalog and a one year subscription to Atari Interface Magazine. For more information, contact TEAC at PO Box 1024, Laytonville, CA 95454.

TINKER ACE OF OKLAHOMA

Tinker ACE of Oklahoma meets the first Saturday of each month at 1 PM (12:30 set-up time) in the Moore Public Library, 225 S. Howard, just off of SW 4th and I-35 in Moore. TACE can be contacted at 16564 SE 18th, Choctaw, OK 73020 or at the TACE BBS (405) 366-1977. ST & 8bit support. Dues: Full - $15, Correspondence - $7. Dues are prorated with renewal each July.

President Ron Hamilton (405) 387-5649



TEAC
The Educator's Atari Club

President, Neville Denetto, 185 Varsity Row, Thunder Bay, Ontario, Canada P7B 5P2.

WACO
WESTMORELAND ATARI COMPUTER ORGANIZATION

Westmoreland Atari Computer Organization meets the second Tuesday of each month in the North Huntingdon Township Town House, Center Highway and Brownstown Road (just off Route 30 near the Hamilton car dealerships, Irwin, PA) at 7:30 P.M.

The $20 annual membership ($24 for family) now includes a subscription to AIM, as well as the vocal, consumer-oriented WACO Printout newsletter.

The Washtenaw Atari Users Group meetings are held every second Tuesday of the month at 7:30 pm in the Michigan Union building on the campus of the University of Michigan on State St. at the corner of S. University in Ann Arbor.

Club dues are $15 per year and provide access to the PD library and subscription to AIM. Meetings feature demos of both 8bit and ST software and hardware. Nonmembers and questions are welcome. Officers can be contacted by calling Craig Harvey at (313) 971-8576 or by BBS at Molin's Den at (313) 451-0524.

Our club meets every third Thursday from September through June with the exception of December when we meet on the second Thursday so as not to conflict with Christmas scheduling. We meet at 7:30 p.m. at the Roseville Gardens Community Centre, 6500 Roseville Garden Drive, Windsor, Ontario, CANADA.

Our club dues are $25(Canadian) per family membership. Each membership entitles you and your family to attend our regular meetings, as well as receive the AIM magazine as well as our own monthly publication, 'exSTracts'.

President Brian Cassidy (519) 966 0305

WNYAUG meets at 7:30 pm on the first Thursday of each month in room 116E, Bacon Hall at the State University College of Buffalo Campus, 1300 Elmwood Ave.

Dues are $15 for new members and $12 for renewing members. Send checks and correspondance to WNYAUG, PO Box 59, Buffalo, NY 14216.

President Mike Husband (716) 825-8486
The Wizard's Attic BBS 681-1654

The GP_EDIT LIBRARY
for use with GFA BASIC 3.0 or higher

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The GP_EDIT LIBRARY allows even novice programmers to get the same results as the professionals do but without the months (or years) of reserach and development time. For game designers the GP_EDIT LIBRARY has proved to be an invaluable tool. Several developers are using the GP_EDIT LIBRARY to create their next commerical program. Call and ask about our GP_EDIT LIBRARY programming contest!

Character graphics - Use the GP_FONT EDITOR to design character fonts in any resolution. Simple to use in your own programs. The library handles everything for you. Peek the screen to find out what character is there. What character is the mouse pointing at? TEXT, PLOT, DRAW, CENTER, CRAWL, etc. SO MUCH MORE!
Room design- How does that game have level after level? They use character graphics! Design rooms with the GP_MAP EDITOR with fonts created with the GP_FONT EDITOR. Loading and displaying these rooms is totally automatic and requires no overhead by the programmer. It's all handled by the GP_EDIT LIBRARY.
Picture loading - Degas .PI?, .PC?, .NEO, .TNY, Spectrum 512, .BLK
Picture saving - Degas .PI?, .NEO
Screen Handling - Manipulate multiple 32k screens each with their own palette information. Copy, unseen by the user. Display these screens using one of 25 different video display styles. This adds video flash to your programs.
Page Flipping- Flicker free graphics with easy page flipping/ sprite routines.
Digitized sound - Play ST-REPLAY files in the background without stopping program execution. Video graphics and digitized sound at the same time!
Sound effects - A library of sound effects you use by calling their procedure name. Also a small library of game sounds that work in the background.
Mouse defintions - A library of useful mouse images that you select by calling just one procedure. Images for CUT, PASTE, TEXT, TARGET, etc.
The GP_EDIT LIBRARY includes the GP_FONT EDITOR, GP_MAP EDITOR, the complete library, several demo programs with source on disk and manual.
Now available at your favorite ATARI ST DEALER! $49.95 Suggested retail price.

" I was able to make a graphics displayer with tons of features within one hour of opening the GP_EDIT LIBRARY. " CB, IL.

" I kid you not, I had multi colored fonts, screen fades, digitized music, smooth animation, in a demo program I wrote the same night I bought the GP_EDIT LIBRARY. " KH, TX.

" The MAP features are great. I've decided to write that adventure game I had always wanted to. Complete with colored fonts and digitized sound ofcourse. " DM, OH.

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Ask for the GP_EDIT LIBRARY demo disk from your ST dealer. (Or call us...)

Now playing on your local BBS or at your favorite PD supplier, the GP_EDIT LIBRARY demo games! Ask for **BATTLE SPACE, MS PAC, BOBBLE,** all designed with the GP_EDIT LIBRARY.

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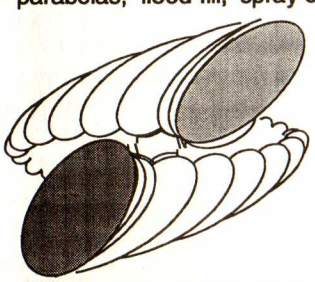
Drawing tools include: lines, polylines, b-splines, beziers, circles, ellipses, arcs, polygons/stars (to 99sides), spirals, parabolas, flood-fill, spray can and eraser.

Auto-trace bit-images into vector graphics. Follows image contours inside and out. Eliminates excess points and uses b-splines or bezier smoothing.

Editing Tools include: editing polyline points(add, delete pts. and scroll the mouse ptr. along the p-line), rotate, mirror, flip, reshape (stretch, size, skew, trapezoidal skew, free corner warp), and duplication with rotation, enlargement along a line or polyline or by input coordinates.



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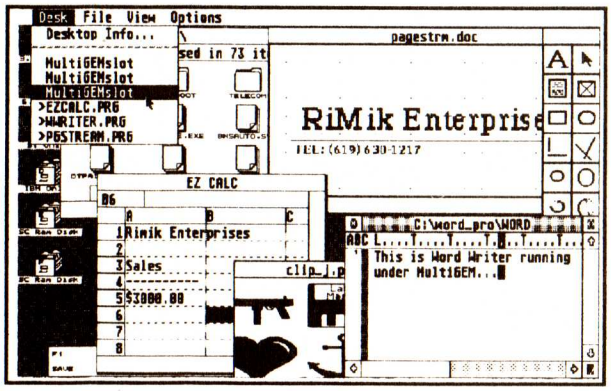

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Many of our customers feel this way after using MultiGEM. A true multitasking system for the Atari ST, STE and TT computers. Run up to six GEM, TOS, ACC or TTP programs all at the same time. TOS and TTP programs run in their own GEM windows. Run accessories right from the "Desk Top". Adjust and allocate memory to any program running under MultiGEM. MultiGEM is completely compatible with most Atari programs. Imagine downloading files with your telecomm. program, printing out a document with your word processor and working with a DTP program all at the same time. It is possible using MultiGEM! MultiGEM is a TRUE multitasking "OS" that is flexible and easy to use. *Works great with CPU accelerators like Fast Technology's T-20.*

Only $99.95

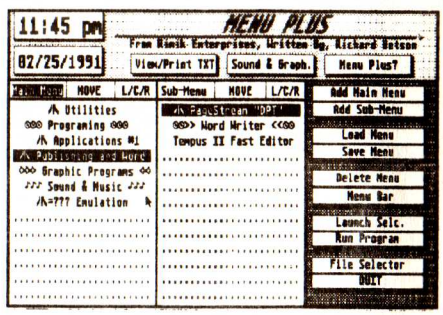
MultiGEM Utilities Disk #1

The MultiGEM Utilities were designed to enhance MultiGEM's performance. There are four programs included in the MultiGEM Utilities Disk #1. MuliMAT will allow you multask format a floppy disk. With Multi-Copy you can multitask copy files. Multi-Print will let you multitask print ASCII text files. Multi-Launch is a complet program launching system that will allow you to run other programs from within any GEM program. These utilities are a must for MultiGEM users.

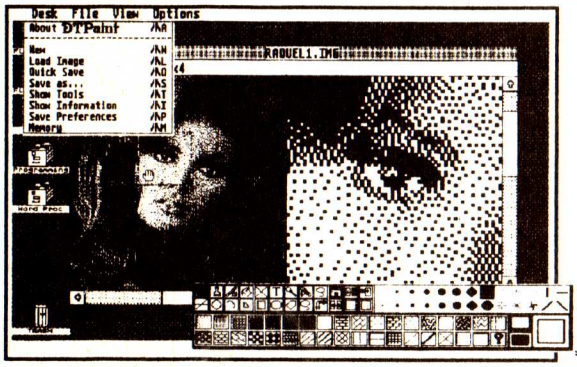
Only $29.95

Menu Plus

Only $39.95



Menu Plus is a full featured "Desk Top" enhancement that allows you to quickly launch (run) any program on your hard disk or floppy disk. Menu Plus uses a creative menuing system that allows you to set up a Main Menu with corresponding Sub-Menus, quick access to over 160 programs, access to the File selector and the ability to launch programs directly from it. View Degas, NEO and Spectrum 512 pictures. Show or print a text file. Play and edit ST-Replay sound files. System settings like screen colors, Blitter Chip and Time and Date can all be set and saved from Menu Plus. Menu Plus includeds a special password feature. All of this and Menu Plus only uses 32k when running a program. ACC version of Sound, Text, and Graphic features included.



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DTPaint is a full function high resolution paint program in a **"Desk Accessory"**. Because DTPaint is a desk accessory it can be used to edit IMG, DEGAS and MacPaint within your favorite Desk Top Publishing package. DTPaint supports GDOS, GPLUS. Included is a full array of tools and has "MAC" like features such as **"Lasso"** and **"Jack Knife"**. Works with Atari^ ST, STE and TT computers.

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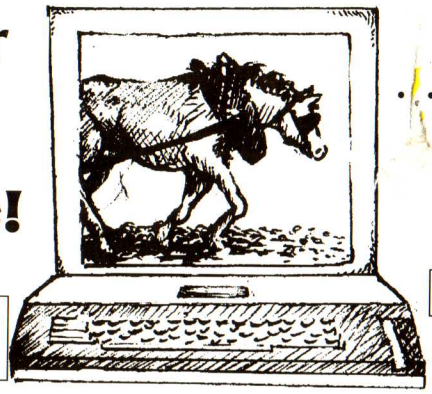

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The **BLACK BOX** is a parallel-port device for your XL or 130XE computer that adds tremendous power to your 8-bit Atari. It is a T-shaped board with two buttons, two switches, and a set of dip switches visible from the outside. The **BLACK BOX** performs three main tasks: interface to a SASI/SCSI bus (for interface to most common hard disks), a parallel printer port, and a RS232 (modem) port. You may partition your hard disk(s) into as many drives as you wish; up to 9 may be active at any given time. By pressing one of the buttons on the **BLACK BOX**, you will enter the configuration menu, where you can re-assign drive numbers, swap partitions in and out, etc. When you exit, you will be returned to your program – undisturbed! Each hard disk partition has its own write-protect flag, and may be set to single or double density. Every hard disk may be write-protected with the flip of a switch. As an option, you may use your computer's XE RAM as a printer buffer, or order the BLACK BOX with 64K of on-board RAM.Another amazing feature of the BLACK BOX is the built-in **screen dump**. By simply pressing a button, the contents of your screen will be dumped to your printer! (You can define text or graphics modes with a switch!) The RS232 port supplies the full spec signals for added compatibility. Its handler takes up no user memory, and can handle 19,200 BAUD! A **machine language monitor** has been added to allow memory disassembly, memory/register changes, and more. The basic **BLACK BOX** unit is $199.95, and $249.95 with 64K RAM (for printer spooler). S/H/I is $8. An optional custom BLACK BOX case is available for $39.95. The Black Box is a product of Computer Software Services... Not the Black Box Corporation.

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