DAL-ACE

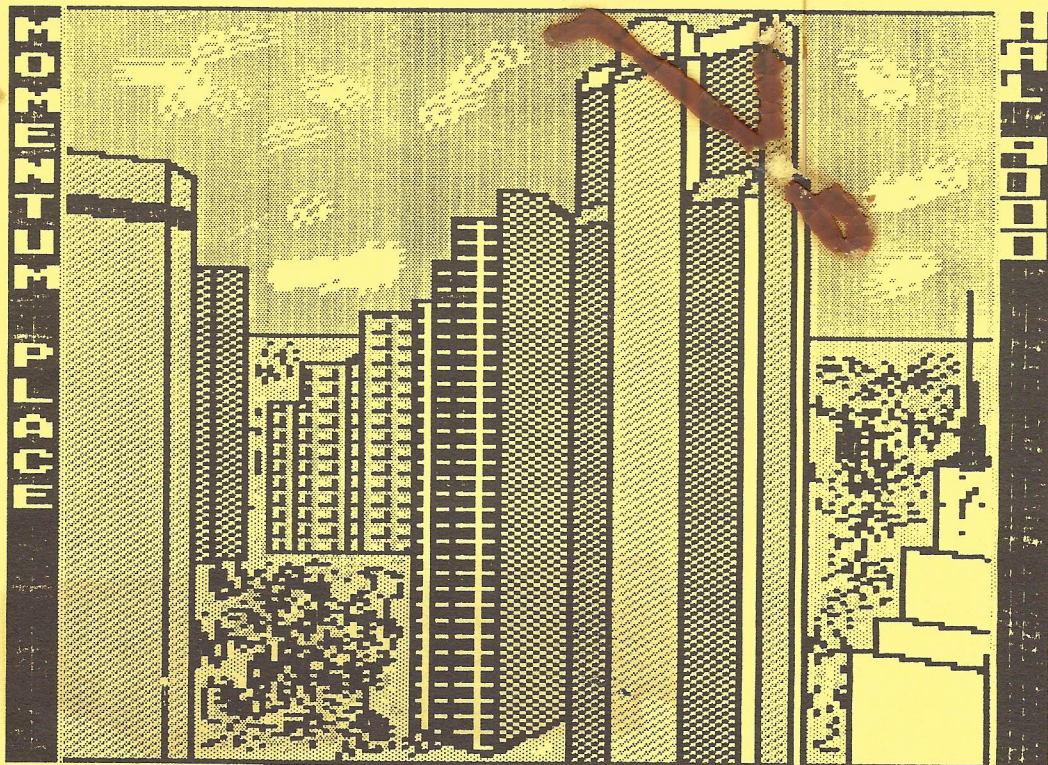## DALlas Atari Computer Enthusiasts

MOMENTUM PLACE

PRESIDENT'S PERSPECTIVE

by John Pellet

Hello again! I hope all of you attended Alan Kay's talk last month. If you didn't, you certainly missed a TREMENDOUS speaker. More about his talk later. This column was NOT written on an Atari, but rather my first non-Atari computer, a Radio Shack TRS-80 Model 100 Portable Computer. In fact, I am writing this at about 30,000 feet, flying to Denver. I've submitted a Model 100 review to be used as room permits.

BYTE Information Exchange

This month we are having a special presentation by BYTE magazine about their new online information service, called BIX, the Byte Information Exchange. This will most likely be held in the auditorium, so that they can use a big-screen display. From all reports, BIX has a VERY active Atari section (and also active sections for the Amiga, Mac, and IBM) plus much material that either won't fit in the montly issue or is more recent than the latest issue. I think the presentation should be very interesting, and I understand that special prices and signups will be available. See Jim's column for further details. We received a press release from DCC which may be found later in this issue if space permits.

DCC NEWS

DCC bylaws were formally adopted last month and, presumably we are in the process of the necessary legal steps to incorporate. The next major event for DCC will be the election of a President and Secretary to serve from July '86 through June '87. Unluckily, John McGinty, the current and only President the Council has ever had is leaving the DFW area and doesn't want to serve long-distance. We live in interesting times! The current Secretary, Louis Guion, will be seeking re-election, unopposed as far as I know. Gary Sewell has been nominated for President by the nominating committee and is also unopposed as far as I know. Elections will be held at the June DCC board meeting, so if you have any comments, please let me or Jim know before then (Monday, June 16th).

The only other item of interest is that Infomart again had a problem with unruly behavior by children. Infomart will not tolerate rowdy behavior and they have directed that DCC ELIMINATE such problems. After much discussion within DCC the following policy has been tentatively adopted, subject to Infomart approval.

SECURITY POLICY

Effective with the June 14 Users' Forum:

* As a general policy, all children should be escorted at all times (children are defined as those under about 15 years of age). This will not be rigorously enforced for (wel-behaved) club members.

* A description of this policy will be prominently posted throughout Infomart.

* Unescorted children are not permitted as guests.

* Guests will be requested to write their name, and the affiliate they are visiting, on their Infocard.

* Two additional security guards will be employed as roamers, to watch for unacceptable behavior.

* Children stopped for unacceptable behavior will be escorted to their parents, or if they are not available, to the affiliate (users group) they are members of or visiting.

* A log will be kept naming detained individuals and will be forwarded to the affiliates.

* Individuals repeatedly in violation of this policy may be barred from Infomart.

FLYERS

We now have printed and distributed flyers describing the club to local Atari retailers. If you've been shopping in the last couple of weeks, I hope you've noticed them. If you don't see any, let one of the officers know.

ALAN KAY'S TALK

As I said above, the special presentation last month by Dr. Alan Kay, courtesy of Apple, was GREAT!. I can't remember when I've heard a more interesting speaker. I sat through the 2 and a half hour talk not only not tired, but ready for two hours more. I will try to recap some of what I thought were highlights, but cannot do him justice. The summary below is my opinion, drawn from memory, and should not be regarded as necessarily representative of what he said.

* We haven't really progressed that far with respect to hardware. 10 years ago, at PARC, they were using bit-mapped "personal" computers with 2.5 meg disk space, in color (prices have come down, of course).

* Ten years ago, children were writing paint and music programs, in a short time (HOURS), using Smalltalk. But Smalltalk has evolved away from the intuitive, interpreted language it once was.

* Modern personal computers are designed backwards. The proper course of design is software then hardware. First figure out what people need to do, then design the software to do it, then pick the hardware necessary to make it all run quickly.

* End users can program. Given the appropriate hardware and software, users should be able to, at the least, customize aplications to their needs.

* The Macintosh is a good but flawed product. The people who designed it did not really understand the PARC research. It needed a hard disk and more speed.

* The Cray supercomputer recently purchased by Apple will allow hardware simulation so software can be designed before construction of working hardware.

* Mr. Kay's current research, in cooperation with a Los Angeles school, emphasizes development of a graphic computer simulation of an undersea world, especially animal behavior. Current work relates to developing the graphic and modeling tools to run the simulation in real time (Sounds like an awesome project to me!).

In all, an event not to be missed. Since DCC received permission from Apple, commercially shot and duplicated videotape copies (Beta & VHS) are available for $41, including tax. Reportedly audio quality is acceptable and video quality good. If you're interested, see me.

IDEAS

Still not much response from what I've put here the last couple of months. But we had a great suggestion when I mentioned fund-raisers last month.

*** GREAT ATR GIVEAWAY ***

Mr. John D. McFarlen, President of SWP, has graciously donated a 64K ATR8000 to the club to be raffled off. If you've wanted CPM, MS-DOS, or just more disk space (up to 1.2 meg/floppy) for your 8-bit Atari, the ATR is the way to go. Raffle tickets will be available for $1 each during June, July, and August. Additional prizes will be detailed in July and August (I guarantee at least first through fifth) so watch this space! All prizes will be given away at the AUGUST MEETING - so mark it on your calendar NOW! Even if you don't need it or aren't interested, buy a couple of tickets to support the club.

BBS HARD DISK

We now have ordered an Atari 20 meg hard disk and I hope it is up and running on the BBS by the time you read this. If so, we'll be bringing it to the meeting ASAP to demonstrate and show everybody.

THANKS!

That's about it for this month. Our July meeting will be late, on the 26th, (FOURTH SATURDAY!) so it will be a while til we meet again. See you then with the latest from the precipice. AND BUY LOTTERY TICKETS NOW!

ENTHUSIASTICALLY YOURS,
JOHN PELLET

Dalace Expired Members as of May 31, 1986

Name	Expires
JOHN F BEHNEMAN JR	5/31/86
MICHAEL J CADDELL	5/31/86
DENNIS D COBB	5/31/86
ELMER CROAN JR.	6/30/86
JOHN DAVIS	5/31/86
EDDIE ERNEST	5/31/86
JOHN W GILLILAND	6/30/86
DANNY GUSTER	6/30/86
MILTON GUTTIERREZ	5/31/86
GERRAL HUBBARD	6/30/86
DAVID J LOVCIK	6/30/86
B. R McLEAN	5/31/86
JOE MENDOZA	5/31/86
PAUL MILLER JR.	6/30/86
JOHN P OLSON	5/31/86
RAY PATRICK	6/30/86
E. G PRITCHARD	6/30/86
R. C RATLIFF	5/31/86
STUART F SILBERKRAUS	6/30/86
JOHNNY STOVALL	6/30/86
STEVE STRANGE	6/30/86
REX W UNGERICHT	5/31/86
KENNETH G WHITE	6/30/86
TOM ZEGUB	5/31/86

[The above list shows DAL-ACE members whose membership has recently lapsed or will soon expire. Please see the Secretary and Treasurer at the next meeting to renew your membership. Thank You!]
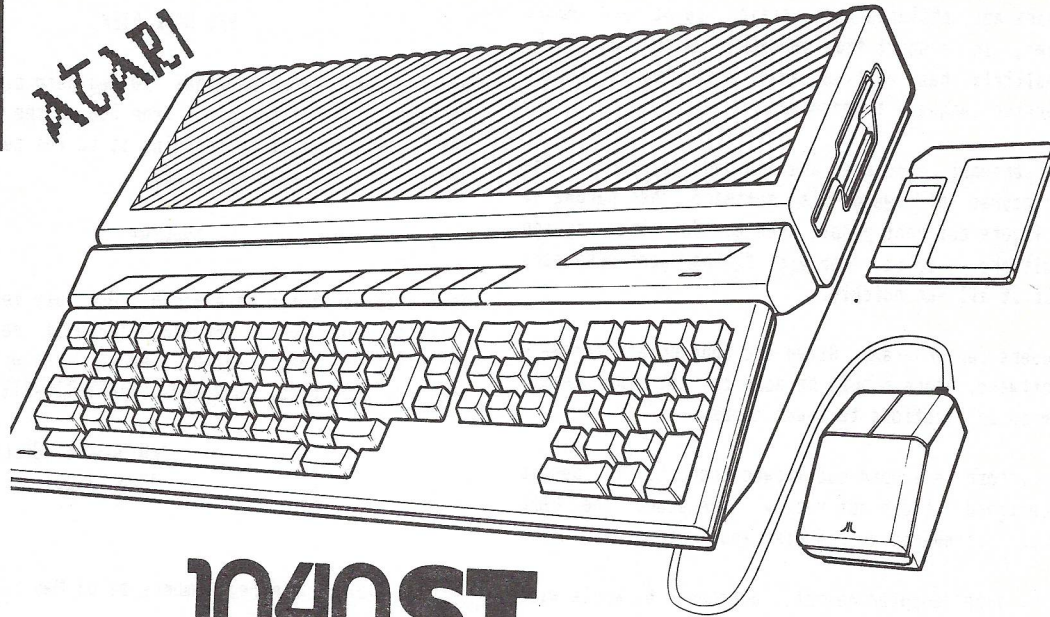
ANTIC ONLINE'S COMDEX WRAP-UP REPORT

By Dewitt Robbeloth, ANTIC Executive Editor

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ATLANTA COMDEX, May 1, 1986 - Synthesized music drowned out the hubbub of COMDEX's final day at the Atari booth as vendors displayed various MIDI-related products for both the XE and ST computers.

Hybrid Arts, from Los Angeles, showed MIDITRACK-3, for the Atari 130XE, that allows the player to control 16 separate tracks. The package lists for $374 and includes a MIDI interface for the XE. MIDITRACK ST, from Hybrid Arts is a professional music system of hardware and software that offers composers 60 programmable tracks and discrete control over 16 synthesizers. It costs $575.

Other musical products for the ST included MIDIPLAY 1, from Electronic Music Publishing (Santa Monica, CA). This $50 hobbyist tool records and plays back up to 16 channels and requires a MIDI synthesizer. Activision showed the $60 Music Studio, an educational and compositional program for the amateur. XLent Software showed its ST Music Box, a MIDI editor and sequencer that can control up to eight channels. It can use either the ST's voices or an external synthesizer, and sells for $50.

Print-Technik of Munich showed a $299 video digitizer (with software) for the Atari STs. The system includes software and a small digitizer box that connects to the computer through the printer port. The digitized image is black and white, with 16 gray levels at 512 X 512 pixel resolution. Buyers must specify if they want the image rendered on monochrome or color monitor in order to get the correct software. The digitizer requires that the subject remain still during a 5-second scanning process.

An animation program called Make It Move rolled the dice and tended bets on a full-color simulated craps table. The craps game is being developed for Harrah's casinos to teach patrons how to play, but will be available on disk for $40. Make it Move is compatible with all popular ST paint programs, and is available for $50 from Avila Associates (Lafayette, CA).

Hippopotamus Software showed their $140 EPROM burner kit for the ST. Consisting of software and a burner device that plugs into the parallel printer port, the system works with 2764, 27128, 27256 and 27512 EPROM chips. EPROMS can be ganged onto Atari ST cartridge cards, available for $15 each.

Regent Base is Regent Software's $99 relational database. It uses the GEM interface but works very much like dBASE II. It uses English commands and has mail-merge with the Regent Word II program. A special Bridge program moves data between other databases. Regent Base is scheduled to ship on June 1.

The next COMDEX will be in Nice, France, in July. The next trade show for Atari and Antic will be the Consumer Electronics Show (CES) in Chicago, June 1-4, where Antic will present the premiere issue of START, The ST Quarterly.

Metropolitan Computer Products
Monthly BBS Contest
By Howard Chang

I feel it's important to acknowledge those vendors who have given strong support to DALACE. I would like to talk about one of them in this article.

Back in February, Metropolitan Computer Products (MCP) started sponsoring a monthly contest on the DAL-ACE BBSs. Each month MCP donates a software product as a prize.

The February and April contests featured word puzzles. The very popular 'trivia' format was used in March. This month we are voting for the best joke (other than our president)! The previous winners were Scott Ian, John Pellet and Marc Salas.

MCP deserves a great big THANKS for their gracious continuing contributions to the club. I say continuous because in 1984 they donated the Prometheus Promodem that has been operating flawlessly on the DALACE-1 BBS.

They put forth a special invitation to all DAL-ACE members to attend Jack Tramiel's recent visit to MCP. Lee Kaplan, President of MCP, made the BBS message from Jack (see last month's newsletter) possible. That was a very memorable experience for those who were able to attend.

We should all keep in mind their strong support as we shop around for Atari products. MCP carries both 8- and 16-bit software and the new 1040STs. You will find their address and phone number elsewhere in this newsletter.

The DAL-ACE BBS Advisor Program
By Howard Chang

I recently started a new program on the DAL-ACE BBSs. I have included an explanation of the program below. I feel it has a lot of potential for the participants. The key, of course, is whether the participants really make use of it. I encourage all new users
not to be shy and to seek help when they need it. This is what a users group is all about, sharing and helping each other out on our Ataris.

PURPOSE:

To provide a defined avenue for the lesser-experienced users to obtain assistance.

BACKGROUND:

There is always a learning curve a user goes through when intially getting involved with the telecommunications world. There's the strange terminology, the new terminal program, the BBS commands, etc. The Advisor Program has been designed to help reduce this learning period and make it as trauma-free as possible.

The individual newcomer must put in the effort to learn the new world he or she is getting into, there is no way around that. But, it's always nice to have someone to turn to when that inevitable question comes up.

There are two types of participants in this program, the ADVISOR and the USER (sounds better than ADVISEE!). As each new USER obtains a password on the BBSs, the SYSOP will assign an ADVISOR. The basic intent is to have a designated person for the new user to go to with questions. The nature of the questions is not limited to telecommunications though it is anticipated most of the questions would be in this area.

Here is what each is expected to do:

ADVISOR:

1) After being assigned to a USER, make initial contact via private mail and introduce yourself.

2) Call in to the BBSs once per week to check for private messages from the assigned USERs. The ADVISOR should also check the public message bases to see if there are any questions he/she could answer.

3) Attempt to answer any USERs questions. If you don't know the answer, either find out or suggest to the USER another person who might know the answer.

NOTE: The ADVISOR does NOT have to be an all-knowing expert! Anyone who has been on the BBS awhile would probably be very capable in providing assistance to new USERs.

(NEW) USER:

1) First and foremost, don't be shy asking for help! The only stupid question is the unasked one.

2) Attempt to understand what you are doing. Even though that ADVISOR is there for the asking, the most effective way for you to learn is through your own efforts. Don't hesitate to ask for help but do so, for example, only after reading any appropriate documentation first. Don't use the ADVISORs as owners manual readers and "looker uppers." They are there to guide not spoon feed.

3) Any ATARI topic is fair game. However, if you have a BBS-specific question, the SYSOP might be the best person to ask.

SYSOP:

1) The SYSOP will assign ADVISORs to new USERs and let the participants know the names so the initial contact can be made.

2) The SYSOP will also be the overall monitor of the Advisor Program.

NOTE: Anything over and above the outlined items (such as giving out home phone numbers) is up to the participants and is not necessary.

EVERYONE is encouraged to become an ADVISOR or a USER. Just let me know and I will fix you right up!! My goal is to have everyone on the BBS signed up as either participant! If you think you don't know enough to be an ADVISOR, then you should be a USER!

ADVISOR PROGRAM PARTICIPANTS

Here are the current "volunteer" advisors and the "users" assigned to them.

ADVISOR:	ASSIGNED USER(S):
Ron Hunter	Noel Burgeois
	Eddie Morales
	Terry Lovelady
Eric D. Coy	Mike Valant
	Bill Wood
Mark Lewis	Frank Corlett
	Jim Tedford
Marc Salas	Rene Tucker
	Robert Felice
Collin Hughes	Richard Crawford
	Larry Bowman
James Duke	Joe Stephens
	Dale Graham
Mike Trombley	John Samaniego
	Donald Mayfield
Hal Waldrop	Scott Anderson
	Bryan Ellis
Scott Phelan	Bill Holloway
	Chas. Brown
	Marion Wright
Gary Loges	Kirby W. Owens
	Kenneth Schwarz
Curtis Collins	Kirk Wilson
	Joe Kostoff

ST Personal Pascal (OSS, Inc.) vs. IBM PC AT Turbo Pascal (Borland International)

by Kirk Pennywitt

As soon as I purchased Personal Pascal (V1.01) for my 1040 ST, I ran some simple benchmarks on it against our IBM PC AT at my office. Our AT is equipped with a speed-switcher to increase the clock rate from the normal 6 MHz to 8MHz. Since this is a fairly common item, and because newer ATs are set up to run at 8 MHz, I included these times in the test as well.

All tests on the PC AT were run in Borland Turbo Pascal (Version 3.01), the de facto standard for MS-DOS Pascal. Because Turbo Pascal defaults are for range, pointer, and debugging checking turned off, they were turned off for the Personal Pascal versions as well. Times on the AT were measured using the hardware timers; I used a handheld stopwatch for the ST, but hopefully they are fairly accurate. All tests on the ST were compiled for TOS.

The Sieve benchmark is the standard test which everybody seems to run on all machines, and it primarily tests integer math operations (actually only integer addition). The fibonacci benchmark tests the recursion code efficiency of the compiler. The float benchmark is a test of the efficiency of the simple floating point operations (+,-,*,/) directly supported by the CPU. The trig/transcendental benchmark measures the efficiency of some of the trigonometric and transcendental library functions supported by the compiler.

I don't claim that these benchmarks are especially definitive, but they do seem to prove that the Atari ST is extremely competitive with the IBM PC AT in terms of a Pascal programming environment, particularly for scientific/engineering applications involving floating point math. The code for each of the tests will be included elsewhere as space permits.

PASCAL BENCHMARK SUMMARY
=========================

Code	ATARI ST	PC AT (6 MHz)	PC AT (8 MHz)
Sieve	6.1 sec.	5.38 sec.	3.95 sec.
Fibonacci	23.6 sec.	23.67 sec.	17.36 sec.
Floating Point	10.1 sec.	14.56 sec.	10.71 sec.
Trig/Transc.	14.1 sec.	16.31 sec.	11.98 sec.

(ED. NOTE: Downloaded from Compuserve)

TOM HUDSON'S CAD-3D: BETA TEST REPORT

By Jack P. Durre'

Reprinted with permission from W. U. N.

I personally consider Tom Hudson, author of DEGAS ($39.95, Batteries Included), one of the premier Atari programmers, and was delighted to be offered a chance to beta-test Tom's ambitious new CAD-3D program for the ST.

CAD is an acronym for Computer-Assisted Design, and it is to the drawing professions what a word processor is to the writing professions, or what a spreadsheet is to professional number crunchers.

My main computer interest has long been CAD. Those of you who know me solely as an Atari users group officer with DAUG and W.U.N. may not be aware that I earn my livelihood as a registered Architect. I've been in practice since 1971 and have my own office in Miami, Florida.

I was fortunate enough to have gotten a sneak peek at CAD-3D back in November at the COMDEX show, when Tom had barely begun working on it. Much progress has been made since. However, certain features were not yet implemented, and it should be noted that the following is a report of my experience as a beta tester -- not a review of a finished product.

At this writing, Tom is in the final stages of clean-up and CAD-3D is scheduled to be available from Antic Magazine's Catalog by the time you read this.

CAD-3D takes full advantage of the GEM system of drop-down menus, windows, sliders, etc. The main screen is grouped into four separate windows -- Camera, Top, Right and Front. Eight different menu titles appear across the top of the screen, including Desk, File, Modes, Views, Light, Generate, Merge and Objects. As you work with the program, you will soon discover how intuitively each of these things seem to work.

PERSPECTIVE

CAD-3D can create a perspective view, as it would actually be seen by an observer, utilizing orthographic projections. Huh? Sorry, suffice to say that by using the top (plan) and side (elevation) views, as might normally be drawn by a designer, it is possible to create a "real" picture of a view that one might actually expect to see.

CAD-3D is capable of doing this in several different forms -- which operate at different speeds. In Wireframe mode, each edge of an object is represented by a line (wire). Lines which are behind other surfaces and would not normally be seen can be removed, with the hidden-line option.

Most importantly, CAD-3D can draw solid surfaces that actually reflect light varyingly, depending on their position relative to a light source, or sources. Outline, another mode, allows for a solid form including surface contour lines that lend more understandable shape to surfaces.

The built-in lighting option allows for placement of as many as three different light sources plus ambient lighting. Each light source can be assigned an intensity value ranging from 0 to 7.

CAD-3D can be operated from the keyboard. However, I found it preferable to use the mouse, clicking on individual windows to select them for manipulation. All four windows can be active simultaneously, but this does slow operations somewhat.

It is possible to select which of two views, such as top or bottom, will be seen in a particular window. But as you grow more experienced with the program, fewer windows seem necessary. It is also possible to fill the entire screen with any one of the windows.

INTUITION

Manipulating these windows seems intuitive, at least for the experienced ST user. For example, the sliders in the side and top windows are used for either of two purposes. In Scaling mode, they are used to increase or decrease the size percentage of object(s) within a particular window. Clicking on the upper-left "button" changes these sliders into rotation controls.

In the Scaling mode, a click in the slider-bar area between the button and either end increases or decreases the scale (horizontal or vertical size), by 10% percent per click. Clicking the arrow at either end of the slider-bar makes the changes at only one percent per click.

You can, of course, drag the slider itself and make size changes up to 50 percent at a time, or rotational changes at up to 180 degrees per use. This same coarse/fine control applies to the rotation option, with either one or 10 degrees changed with each click of the mouse button.

In the camera window, the horizontal slider affects the zoom (magnification) while the vertical slider alters the perspective, but the same rotational control is still used.

I found it quite simple to scale (size) an object up or down, in all three axes. However, without any guide to the relative proportions of the views, the program loses some of its practicality. Tom has indicated that he will attempt to include some means to measure the proportions, allowing the designer to effectively measure the three dimensions of a shape and convert those proportions into real-world sizes.

Obviously, one of the more important facets of a CAD program is its Drawing (generate) mode. CAD-3D uses two different processes -- Spin and Extrude -- to create the basic shapes needed by an artist or designer. A grid with optional "snap" is also available.

PRIMITIVES

Provided as primitives are three different sizes of spheres (each having a different degree of fineness), a torus and a cube. (I would suggest at least one more, a wedge.) Using these various objects challenges your skills when first learning the program. For example, you could select the cube primitive and stretch it horizontally while smashing it vertically, to create a flat, thin, groundplane surface.

This is somewhat like squeezing and smashing modeling clay, but with a great deal more control. Having created a base surface, you can now Extrude an irregular object (a pentagonal prism, for example) and place it upon the base. The Extrude window is divided into four quadrants, with three menu choices across the top of the screen -- including "rubberband."

The Spin option creates rounded shapes composed of curves, spheres, arcs and the like. Using either a "connect" option or the rubberband, a sectional view of an object is created on one side of the vertical axis and the computer generates the opposite half.

Most design objects are composed of multiple primitive shapes. You can create each portion individually, arrange them into the proper form, and then join them into one single object. It is also possible to create new shapes by subtracting one shape from another. This Generate section of CAD-3D is likely to both frustrate and fascinate users.

Suppose you wanted a rectangular shape with a sloped upper surface. One way to create this would be to extrude a triangular object and revolve it by 90 degrees before placing it on a cube shape.

I've puzzled over pyramids (a cone, actually, with only four vertices), cubes with holes through them (still working on that one) and other complex shapes. Still, CAD-3D offers a way to remove the burdens traditionally associated with drawing realistic pictures while presenting the operator with new challenges.

Obviously, you could add elements to a drawing until a final result is achieved. Once a group of individual objects is complete, you could relocate the entire group within various windows by electing to "drag all", or you could drag one object at a time. These options can be done in one or two dimensions at a time.

SUPER VIEW

The Super View selection creates a full-screen view of the object(s). With a color monitor you can choose two colors in seven shades, or one color in fourteen shades. Monochrome systems have an option of black on white, or white on black. With CAD-3D's Animate feature, you can select different Super Views of an object to create a series of "slides." Imagine an Architect presenting to the client a series of views that seem to approach the building, enter it and move around within.

Also, CAD-3D can save pictures to other ST graphics formats for further enhancement. You can select DEGAS, NEO or the Antic Catalog C.O.L.R. Editor.

A major criteria for professionals working with CAD programs is their speed. At times it seems to tax the calculating abilities of the 68000 microprocessor, with re-draw times sometimes running 10-15 seconds for a minimal change. Of course, as far as the computer is concerned, extensive changes require the same amount of drawing as simple tasks.

CAD-3D works with the 520ST or 1040ST. Obviously, additional memory allows more complex objects to be stored. Presently, the total number of separate objects CAD-3D can handle is 20, but this can be increased by using the Joint and Merge options.

This preview may seem rather lengthy to the non-user. In reality it is pitifully brief. Tom Hudson's CAD-3D is a complex and serious tool. It has even more features, which I have only hinted at here. For those of us needing a professional drawing program, it is wonderful! For anyone else, CAD-3D provides an easy way to accurately draw objects more complex than ever seemed possible!

Fully utilizing CAD-3D requires the ability to think in three-dimensional space, and it could be frustrating for those unable to do so. There is, however, probably no better way to learn three-dimensional thinking than by using CAD-3D. This program should be in the office of every Architect, Engineer, Interior Designer, Contractor and Commercial Artist, to mention only a few!

XLent Software's TYPESETTER: A Review
By Dave Gillen

Hello!

I promised in May's "Editor's STRINGS" that I would do a review of TYPESETTER. Well, here is my attempt to do just that.

Already, I'm enjoying this review. As you might have guessed, I'm actually using TYPESETTER to prepare this review. Mixing the different fonts is both fun and a pain. The fun comes from the ability to display for you (in an artful manner) something that would otherwise be rather mundane. The pain comes from trying to remember which font I used for the various portions of the article. For example, right now, I'm using the SERIF font.

Now, I've switched to the BLOCK font. There are other things that you can do with TYPESETTER. We'll discuss those a little later.

The original reason that I purchased TYPESETTER was to try and "computerize" the newsletter. It isn't going to happen with TYPESETTER. I bought the product to be able to load in different text files, juggle them about in a single program, and then spit out a single page of the news-newsletter. We could then bundle the pages easily and send them off to the printer. You see, after a while, cut and paste is a drag (which is how we do the newsletter now). Unfortunately, I had too high of expectations. Sigh.

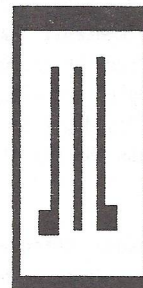So, what can you do with TYPESETTER? Well, you can use a primitive text editor to type in text using various fonts. **The sizes of the fonts can be varied as you can see.**

You can change the spacing of the characters or the vertical.

My attempt at an icon using the Sketch Pad.

(vertical text running down right column:) You can change the spacing of the characters or the vertical.

When I said that the editor was primitive, I meant that the usual features of text editors (inserting new text within existing text, cutting and pasting, searching for strings, global replacements of strings) are missing. If you make a mistake and discover it later, you have a very hard time correcting it.

In addition to text editing (using various fonts) you may use a sketch pad to draw unique icons (or other strange little pictures). In the preceeding column you may see my first attempt at this art. Do you recognize it? Why it's the (infamous) Atari "Fuji"! The sketch pad is a little clumsy to use with a joystick, which is all that you can use with a 48K Atari (like my 800XL). The sketch pad does allow you to mix text and some semblance of graphics on the same page.

There are other drawbacks about TYPESETTER. First, every page that you save requires 220 sectors on a DOS 2.0S diskette. A pretty hefty amount in my opinion. Second, the documentation is mediocre. The authors give you curt phrases to describe each command, no examples, few ideas (for us neophyte typesetters) but they reserve a couple of pages for advertisements. A bit tacky in my opinion. Third, the commands are somewhat cryptic and clumsy. Fourth, the package is slow and a bit jerky.

As a balance for the many drawbacks there are these bright spots. First, there are two different versions: one for 48K Ataris and one for an Atari 130XE. Both versions are on the same diskette. I reviewed the 48K version. According to the documentation, the 130XE version as some additional functions that improve the text editor and the sketch pad. Second, this is the only product that I've seen (or heard of) that gives you any typesetting/page layout capability.

So what's the bottom line? If you're looking for a program that uses different type fonts or one with some limited page-layout ability, then you may want to buy this program. Otherwise, don't waste your money. At $35, I feel that the authors could have done a better job.

An final note. Please excuse my grammatical and spelling mistakes. I take great pride in my grammar and spelling. As I said in the article, this program is very cumbersome to use to correct mistakes. DCG?

SOURCE for ST CONNECTORS

Antic Magazine reports that the unusual ST cable connectors are now available from Alpha Products, 5740 Corsa Avenue, Westlake Village, CA. 91362 (818) 889-9304.

Also reported in the same column is the news that pin 2 of the monitor connector is a composite video signal. Pin 13 is the ground. Looking at the monitor plug, pin 2 is the second pin from the right on the top row. Pin 13 is the single pin at the bottom. Check with disk library table at the meeting. We will try to hook up a monitor and try this out.

*** WANTED ***

BIT-3 FULLVIEW 80

Contact: Fred Fischer
          (214)630-8055 (Office)
          (817)282-1997 (Home)

Atari 520ST Disk Utilities

By Ravi Kulkarni

Reprinted from the February issue of CURRENT NOTES

The Atari ST comes with a basic set of utilities integrated into the desktop to copy files and disks, format disks, etc. However, if you have the basic one-drive system, you will quickly find that it becomes quite inconvenient to do simple things like copy files and impossible to correct mistakes like accidently deleting a file. To make some of these tasks easier and also provide additional capability to fix and learn about internal system functions, many companies have come out with a set of disk utilities. We review here the products by Michtron, Holmes & Duckworth, and Haba Systems.

All three programs provide the basic utilities to examine and modify disk sectors and to recover deleted files. All three also use the GEM interface with menus to provide a user-friendly front end. The programs differ however in performance and in the number of features.

The MichTron disk utilities are nice in that they are integrated in one program. There is also an optional separate program to enable fast copying. Michtron seems to have adopted the policy of unbundling their software including their ramdisk and printer spooler. Taken together they are an attractive package. However split apart they are less so. The disk utilities are nicely done. The disk sectors are displayed in both HEX and ASCII and the update is very quick in moving to different sectors. To modify a particular location one simply points with the mouse and types in the new value. The disk can be accessed by track/sector as well as by file. One can search through the file for a specific string. The file recovery is nice in that it displays the deleted files and gives you a choice of which to try and recover. There are a few bugs, namely if there is an error reading the disk it displays the old track/sector information while indicating that it is actually displaying the new track/sector. One missing feature is the inability to display and edit memory. This feature is helpful if you want to poke around and look at the ST's memory. The copy sector feature is available and is useful to create bootable double-sided disks.

The H&D utilities are separate programs so if you want to do several things, you have to exit and run a different program. One useful utility that it has is a directory print program so you can avoid screen dumps.

The H&D programs have the basic features of the MichTron program plus a memory editor. However the screen update of different sectors is much slower than either the MichTron or Haba programs. Also one has to enter by hand the sector and track no. desired. The editing of the sectors is also inconvenient in that one can only edit in ASCII or HEX at one time. A plus point is that the menu allows a HEX/ASCII dump of the current sector which MichTron does not have.

The Haba disk utilities are nicely integrated like those of MichTron, but it is copy protected which is ridiculous for something as commonly used as disk utilities. Also there are a few fatal bugs that can cause the system to hang. The documentation is online but is so painfully slow to peruse that it quickly becomes frustrating. The basic features are similar to the MichTron utilities with the additional feature of memory editing. The screen update of different sectors is fast, but one can only address the disk by the absolute sector no. and not by track/sector. The fatal bug is when you are merely viewing the disk and you perform some function that makes the program try to write out the sector. A dialog box appears with a cancel box, but the mouse arrow disappears so one can only continue to retry. Some plus features are the ability to save sectors to a file to be printed later or to merge with another file or disk. Also one can set the default drive whereas with MichTron or H&D one is stuck with the drive that you started out on.

All three programs provide useful features with the MichTron and Haba programs having a better user interface. However when one compares these programs with those available for other computers such as the MAC or the IBM PC, the quality of the programs is a little disappointing. The IBM for example has a print formatter, memory and disk testing, ASCII and HEX dump, directory check for checking the integrity of the file system and so on. The user friendliness of the ST programs is without question superior. One can only hope that the second generation of utility programs provides the quality of features as well.

The Babbage's Top 10
June

Entertainment

1. Elite
Commodore	Apple
$22.46	$26.21

2. Scenery Disks
IBM	Commodore
$14.96	$14.96

3. Silent Service
IBM	Commodore
$26.21	$26.21
Apple	Atari
$26.21	$26.21

4. Jet
IBM	Commodore
$37.46	$29.96

5. The Bard's Tale
Commodore	Apple
$30.00	$33.75

6. Ultima IV
Commodore	Apple	Atari
$44.96	$44.96	$44.96

7. The Black Cauldron
IBM	Apple	Atari ST
$29.96	$29.96	$29.96

8. Hardball
Commodore	Apple
$22.46	$26.21

9. Flight Simulator
IBM	Macintosh
$37.46	$37.46

10. Star Fleet I
IBM	Commodore
$37.46	$37.46
Apple	Atari
$37.46	$37.46

Productivity

1. Print Shop
IBM	Commodore
$44.96	$33.71
Apple	Atari
$37.46	$33.71

2. Newsroom
IBM	Commodore	Apple
$44.96	$37.46	$44.96

3. Print Shop Library #1
IBM	Commodore
$26.21	$18.71
Apple	Atari
$18.71	$18.71

4. Lotus 1-2-3
IBM
$297.00

5. Print Shop Companion
Apple
$29.96

6. Bank St. Writer
IBM	Commodore
$59.96	$37.46
Apple	Atari
$52.46	$52.46

7. Dac Easy Accounting
IBM
$52.46

8. Willwriter
IBM	Commodore
$29.96	$29.96
Apple	Macintosh
$29.96	$29.96

9. Clip Art Volume 2
IBM	Commodore	Apple
$29.96	$29.96	$29.96

10. Print Master
IBM	Commodore	Apple	Atari ST
$44.96	$26.21	$29.96	$29.96

Education

1. Math Blaster
IBM	Commodore	Apple
$37.46	$37.46	$37.46

2. Typing Tutor III
IBM	Commodore
$37.46	$29.96
Apple	Macintosh
$37.46	$44.96

3. Music Construction Set
IBM	Commodore	Apple
$30.00	$18.00	$30.00
Macintosh	Atari	
$37.50	$18.00	

4. Mastertype
IBM	Commodore	Apple
$29.96	$29.96	$29.96
Macintosh	Atari	Amiga
$37.46	$29.96	$29.96

5. Early Games for Young Children
IBM	Commodore	Apple
$26.21	$26.21	$26.21

6. Lovejoy's SAT
IBM	Commodore	Apple
$44.96	$37.46	$44.96

7. Linkword Spanish
IBM	Commodore
$22.46	$18.71
Apple	Atari
$22.46	$18.71

8. Spanish Vocabulary
IBM	Commodore	Apple
$14.96	$14.96	$14.96

9. Perfect Score SAT
IBM	Commodore
$52.46	$52.46
Apple	Macintosh
$52.46	$59.96

10. Kindercomp
IBM	Commodore	Apple
$22.46	$15.71	$22.46

Pick of the Month:

▼

Bop 'n Wrestle
Commodore
$22.46

Pick of the Month:

▼

Traveling Sidekick
IBM
$52.46

Pick of the Month:

▼

The Music System
Commodore
$29.96

(Continued from page 7)

Fibonacci Pascal Source Code

```
{$R-,D-,P-}

program fibo;  { Tests recursion }
const
  ntimes = 10;
  number = 23;
var
  i, value : integer;
function fibo(x : integer) : integer;
begin
  if x>2 then fibo := (fibo(x-1) + fibo(x-2))
  else fibo := 1;
end;  { of function fibo }
begin
  writeln(ntimes,' iterations.');
  for i := 1 to ntimes do value := fibo(number);
  writeln('fibonacci(',number,') = ',value);
end.
```

(Runs in approx. 23.6 sec on Atari ST (Personal Pascal).)
(Runs in 23.67 sec. on IBM PC AT @ 6 Mhz. (Turbo Pascal).)
(Runs in 17.36 sec. on IBM PC AT @ 8 MHz. (Turbo Pascal).)

Trig & Transc. Pascal Source Code

```
{$D-,R-,P-}

program trig_trans; (Tests trig and transc. libraries)
var
        a, b, c : real;
        i       : integer;
begin
        writeln('1000 iterations.');
        a := 3.1415926;
        b := 5.1234548;

        for i := 1 to 1000 do begin
            c := ln(a);
            c := exp(b);
            c := sin(a);
            c := cos(b);
        end;
        writeln('Done.');
end.
```

(Runs in approx. 14.1 sec. on Atari ST (Personal Pascal).)
(Runs in 16.31 sec. on IBM PC AT @ 6 MHz. (Turbo Pascal).)
(Runs in 11.98 sec. on IBM PC AT @ 8 MHz. (Turbo Pascal).)

Erastosthenes Sieve Pascal Source Code

```
{$R-,D-,P-}

(* Erastosthenes Sieve Prime Number Program *)
(* Tests integer math *)

program prime;
const
  size = 8190;
var
  flags : array [0..size] of boolean;
  i,prime,k,count,iter : integer;
begin
  writeln('10 iterations');
  for iter := 1 to 10 do begin
      count := 0;
      for i := 0 to size do
          flags[i] := true;
      for i := 0 to size do
          if flags[i] then begin
              prime := i+i+3;
              (writeln(prime);)
              k := i+prime;
              while k <= size do begin
                  flags[k] := false;
                  k := k + prime
              end;
              count := count + 1
          end;
  end;
  writeln(count,' primes.')
end.
```

(Runs in approx 6.1 sec. on Atari ST (Personal Pascal).)
(Runs in 5.38 sec. on IBM PC AT @ 6 MHz. (Turbo Pascal).)
(Runs in 3.95 sec. on IBM PC AT @ 8 MHz. (Turbo Pascal).)

Floating Point Pascal Source Code

```
{$D-,R-,P-}

program float;  { Tests floating point operations }
var

        a, b, c : real;
        i       : integer;
begin
        writeln('10000 iterations.');
        a := 3.1415926;
        b := 5.1234548;

        for i := 1 to 10000 do begin
            c := a * b;
            b := a / c;
            a := b + c;
            c := a - b;
        end;
        writeln('Done.');
end.
```

(Runs in approx. 10.1 sec. on Atari ST (Personal Pascal).)
(Runs in 14.56 sec. on IBM PC AT @ 6 MHz. (Turbo Pascal).)
(Runs in 10.71 sec. on IBM PC AT @ 8 MHz. (Turbo Pascal).)

Sundog ... A Frozen Legacy?

By Roland Gabeler - NOVATARI

Reprinted from April issue of Current Notes

Before I get into the actual review of this ST game, I
would like to give you an idea how expensive this game
was for me to purchase. I had no plans to purchase an
ST computer for a couple of years. After all, the "new"
Atari made a big deal of stating that they were not a
"game" company, and since that is the main purpose for
which I use a computer, I saw no immediate need to
consider an ST. Then came the demo disk of the Sundog
.... and instant love.   The graphics quality blew me
away.   I had seen the beautiful graphic pictures the ST
was capable of producing but nothing translated into a
great game. In fact, I had read that many of the sprite
capabilities and other things I don't profess to
understand, but which a great machine needs, would not
be part of the ST's hardware.   I assumed the game
manufacturers would find a way to get around the
limitations but not in the first year of production.

Then I saw the Mudpies and Hex games that proved that
smooth animation and "arcade" style games were possible
on the ST. So, combining the spectacular smooth quality
of the Sundog demo with the aforementioned arcade
capabilities, I soon began to work on the problem of
amassing the necessary dollars to acquire an Atari ST.
It was all Sundog's fault, but that was a demo, not a
working game ... was it worth it when the game came out
six months later? In a word ... YES!   I have enjoyed
the final product more than even the demo had led me to
believe.

Sundog is based on a story of a man who inherits a star
freighter, very similar to the Millennium Falcon in the
Star Wars trilogy. The goal of the man (and the
gameplayer) is to locate a new colony on the planet
Jondd, to determine what supplies they need, and to
scour the planet and nearby solar system to obtain the
supplies and deliver them safely to the colony.

First attempts to locate supplies on the planet, may
require a lot of searching of various buildings. This
is usually accomplished in a quiet relaxing methodical
manner, the only hassles being street muggers who are
usually easy to avoid. This phase of the game allows
you to explore the surface of the planet by detaching a
pod (land rover) from your spacecraft to explore the
planet's surface.   The street muggers bother you when
you leave that pod to walk on the street. You have to
leave the pod to enter buildings to buy supplies,
ship-repair parts, food and drink, weapons and shields,
and gather gossip from the local people.

The price at which you buy goods and later sell them is
the only way to increase the money you have to use in the
game. You start out with a great deal of money located
in banks on several planets, but spend quite a bit to buy
the supplies needed by the colony, ship repair parts
etc., and to keep your plans afloat. By the way, you
also have to get enough rest by sleeping, don't do what I
did and attempt to sleep in a booth in a bar. The result
is the same as if you did that in downtown anywhere USA
-- you wake up missing everything you own! Sleep only
in the safety of your pod, ship, or in a hotel. Soon you
find the next phase of exploration requires you to leave
the quiet comfort of the home planet to find needed
supplies on other planets.

Flying the Sundog is sometimes frustrating as you attempt
to comprehend the various displays of navigational
information and make the ship go exactly where you want
it to land.   But soon you will overcome these problems
and be exploring other planets, searching for the
supplies the colony is requesting. You find the supplies

in a quiet search of the planet's buildings, return to the ship and lift off to return to Jondd.

Then for the first time, chaos breaks loose, the pirates in outer space attack you quickly and with considerable power. If you are like me, since everything had been quiet so long, you would be caught frantically installing the tactical display and arming your lasers to fight back. Wrong move! The shields have a greater priority and by the way they take a while to charge! I was, needless to say, dead! This is the pinpoint I had been looking forward to -- as I have stated before, I am not the pure adventure-game type. I had been enjoying the game but was looking forward to some action, now I had it, but I was not prepared. So, as you can see, Sundog has the best of both worlds, an animated graphic adventure and fast arcade action.

The game is referred to by the company as a "zoom" action game. This reference seems to be related to the part of the gameplay when you enter a building, the scene of the interior "zooms" to a closeup of the interior. This is a nice touch but maybe not a feature the requires a headline? The other headline states this is a "frozen" legacy, well that would conjure up a vision of a game on an ice planet like Hoth in the Star Wars trilogy, but instead seems to refer to one of the items the colony needs, a cryogenically frozen colonist stored in various warehouses in the region.

The bottom line on Sundog: a game of search in the various cities of the various planets, fighting off the pirates, and surviving to search and fight again. I love this game but rarely sit down to play it unless I have an hour or more to explore.

A few notes on other aspects of Sundog. This game leads you to believe it is not a protected copy. It will copy using many available methods ... but ... the copy you get will play a short-lived game, usually lasting fifteen minutes or so before you meet a game-ending red screen! This is the neatest copy protection I have ever seen, because if you give the "copy" to a friend, he will get to play it just long enough to perhaps fall in love with it before it goes "red" on him. I have overheard complaints in the computer stores of people saying Sundog has a bug that causes this to happen. Well, I can't guarantee it doesn't have any bugs, but I can assure you that my original has never crashed "red". One unfortunate aspect of this is the fact that you have to play and save the current game to the original Sundog disk. If you could write protect this disk you wouldn't feel such a great need to have a backup, but you can't play this game on a write-protected disk. Therefore you

are going to worry about messing up your original and would seek to make a backup. This is why many of the people who bought the game thought the game had the "red" bug as they backed it up and played the "backup" copy. The game does allow you to save games to another disk but only as a transfer after it has saved it to the original.

Another point is a sincere hope the producers of this game will bring it out for the 8-bit Ataris. While I know it can't be produced in these great graphics and work with the mouse, I know it can be done on the 8-bit since it was originally put out on the Apple computer. If you have an ST, buy Sundog. If you don't, pray they convert it to the 8-bit or ask an ST owner to let you borrow his computer one weekend afternoon and take off on a great exploration adventure.

(EDITOR'S NOTE: ST-COPY produces a working copy.)

CPT Corporation

(The CPT showroom at INFOMART, room 3027, will be open for the June 14 meetings. For more information, call the CPT showroom for Roy Sonneborn or Marta Volbrecht at 746-5120.)

CPT Corporation designs, manufactures, sells, supports and services advanced automation equipment including intelligent departmental resource processors, individual and clustered mass storage systems, workstations, networking equipment and a complete line of peripherals and supplies. The firm's integrated information processing applications include word processing, data processing, data base management, graphics and communications.

The company's products are distributed and supported globally through company-owned branches, independant dealers and independant international distributors. Through these channels, CPT provides sales and service to its installed base of more than 80,000 systems in over 600 U.S. cities and in more than 55 countries.

DCC PRESS RELEASE

BYTE Information Exchange Presentation

Several demonstrations of BYTE Magazine's new computer conferencing system BIX (BYTE Information Exchange) will be offered to members of the Dallas Computer Users Forum on Saturday, June 14, 1986 at the Informart.

On hand for the presentations will be George Bond, Executive Editor of BIX and Doug Webster, Director of Business and Marketing. Planning is still underway for the program, but presentations are being arranged for IBM, Apple, Atari and Commodore groups. Exact times will be posted as they are finalized.

BIX began commercial operations in November, 1985 and has already registered some 5,000 participants. The system is available worldwide via Tymnet and can be used by anyone interested in exchanging ideas, opinions and information about microcomputer-related subjects.

BIX users can choose from over 150 individual conference topics and can join as many or as few subject areas as they wish. Joining a specific conference brings them together with other BIX users who share their interests in that subject and related topics. Users can leave old subjects or join new ones at any time. BIX keeps track of each individual's conference memberships and what messages he has or hasn't read. Among the system's most active conferences at present; Amiga, Atari, Macintosh, Apple and IBM, Pascal, Modula 2, C Language, Unix, Software Engineering, and a lively system debate on the Star Wars program. A growing number of commercial firms are also offering on-line technical support for their hardware and software products on BIX including Lattice, Borland, ITC, Realia and Manx.

The June presentation will demonstrate the system's conferencing software, electronic mail and software listings areas and provide members an overview of the kinds of information now available on the system. Information will also be available about discounts on both BYTE subscriptions and BIX registration fees.

NEW ST LIBRARY DISKS

We have 13 new ST disks this month. The first 12 are from the Current Notes ST Disk Library. All 13 are briefly described below.

#11 MONOCHROME SLIDE SHOW: 8 high res. pictures: JACK, GREETIN, GELOAN, FOURSUM, BUGS, GRID/1/2, & SLIDE.PRG.

#12 ST TERMINAL PRGS: 4 terminal programs: STERM, TERM, HITERM, STTALK - all latest PD versions.

#13 SAMPLE LOGO PRGS: Over 30 sample LOGO programs.

#14 RAMDISKS & ONEMEG.DOC: Several PD ramdisks, with documentation and several memory upgrade files.

#15 UTILITY DISK: 6 directories, including ACCESSORIES (2 clocks, breakout, several calcs, puzzle, ram, ramacc), BOOT (noverify, dblboot), DISKTOOLS (copydisk, sectedit, sq/unsqueeze, format), PROGTOOLS (mushro, stdio, title.bas), PRINT TOOLS (dump, label, print, spool, printdir), & GRAPHICS (degcol, effects, neocon, omaker, smaker, slide, windows), timeda, & calc. Some doc.

#16 XLISP: Unix port of LISP language, with full doc.

#17 ST GAME DISK: Megaroids, Mastermind, Othello, Backgammon, Ripcord, Target, Life, Journey.

#18 INSOFT MAGAZINE 1/86: Reprinted with permission.

#19 DEGAS UTILITY DISK: 24 fonts for DEGAS and NEO/DEGAS/KOALA converter.

#20 MICROEMACS: PD version of famous editor. With full documentation.

#21 UTILITY DISK: 11 folders: ASSEMBLER, CP22 (command processor), DISKCOPIERS, DLIBRARY (ss library prg), FORTH-83 (fm San Leandro CC), GENERAL (printdir & timedate), LABELS (label2), PALLET (set display colors), PICSWITCH (convert pic from Amiga/Mac/other), SQUNSQ (squeeze/unsqueeze), & VOLUME (change disk label).

#22 PASCAL & MODULA-2: Pascal: OSS doc file & sample programs; Modula-2: demos, bios/xbios calls, etc.

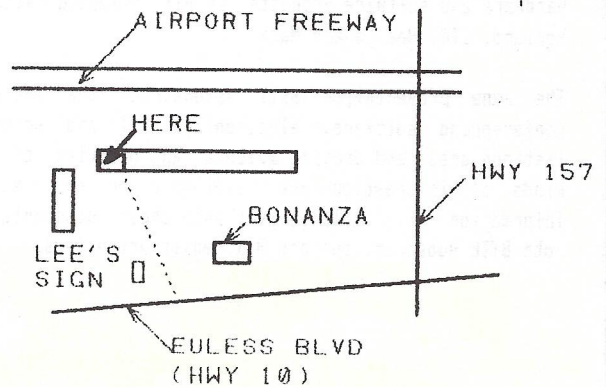#23 STAR RAIDERS: Pre-release ST version of classic. Not finished, but very playable. 8-bit commands.
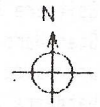
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Distribution Crew:	Steve Markley,	
	Cathy Barros,	
	David Miller,	
Advertising Manager:	Don Adams,	350-2206

NEWSLETTER SUBMISSIONS

Submissions are WELCOME in ANY form. It is extremely helpful if all submissions conform to this format:

Condensed print (16 to 17 CPI).
Column width of 56 characters (3 7/16 inches).
Page length of 9 inches (54 lines @ 6 LPI).
Right and left margins justified for text.

All submissions should be given to one of the staff above or brought to the production meeting both printed out and on a DOS or TOS disk.

DAL-ACE CALENDAR

Here is the current schedule of upcoming DAL-ACE events.

Saturday, July 12	Newsletter Production Mtg
Saturday, July 26	Main Meeting
Saturday, August 2	Newsletter Production Mtg
Saturday, August 16	Main Meeting
Saturday, August 30	Newsletter Production Mtg
Saturday, September 13	Main Meeting

Newsletter production meetings are usually held at 1 PM on the Saturday two weeks before the regular meeting date at Jim Chaney's house, 916 E. Berkley in Richardson.

Main Meeting dates that are more than 90 days ahead of time are tentative. The Infomart reserves the right to change the dates, so check the newsletter for the latest schedule.

INFOMART DIRECTIONS

From north Dallas, take either Stemmons (I-35E) or the Dallas North Tollway SOUTH. From Stemmons, take the Oak Lawn exit, turn east (left) and park at Infomart, on the left just after you go under Stemmons. If you're using the tollway, exit right on Wycliff, go left on Harry Hines to Oak Lawn and turn right. Infomart will be on your right. From the south, take Stemmons north then follow above. Infomart is the big white steel and glass building south of the other 'marts. The main entrance faces Stemmons. Guests are WELCOME!!

*** MEETING INFORMATION AND AGENDA ***

10:00 - 10:30	NEWSLETTER EXCHANGE SIG
11:00 - 12:00	CLUB SALES
11:00 - 11:30	NEW ATARI USERS
11:30 - 12:00	MEMBERSHIP SIGNUP &
	NEWSLETTER DISTRIBUTION
12:00 - 2:00	8-BIT DEMOS
	BUSINESS MEETING
	OTHER DEMONSTRATIONS
1:00 - 2:30	CLUB SALES
2:00 - 4:00	ADVENTURE SIG
	FRACTAL SIG
	ST SIG

Meeting rooms and additional information will be posted on the schedules at the main entrance, and the main kiosk, which will be manned from 9AM to 4PM. Disk-of-the-month and garage sales will be in the main meeting room. Vendor sales will take place in the basement.

NEWSLETTER ADVERTISEMENTS

Personal sale ads are free to current members

COMMERCIAL RATES:
Full page (7 1/2" H by 9" V) $35
Half page (7 1/2" H by 4 1/4" V) $25
Quarter page (3 1/2" H by 4 1/4" V) .. $15
  * Long term contracts are available *
  *   at reduced cost.   *

Ads must be camera ready. Copy must be received PRIOR TO the production meeting date at left. Mail copy to DAL-ACE Newsletter, P.O. Box 851872, Richardson, Texas, 75085-1872 OR contact the Advertising Manager listed at left. Copy received after the deadline will be run the following month. For contract advertisers, if no new copy is received by the deadline then the most current ad will be re-run.

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