

CURRENT NOTES

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Vol. 11, No. 6

July/August 1991
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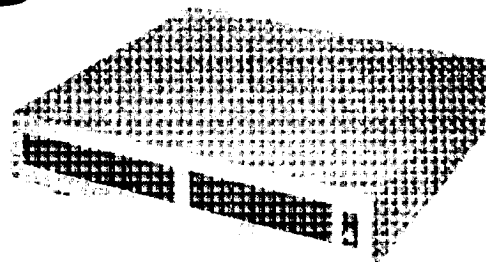
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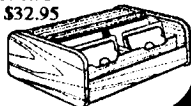
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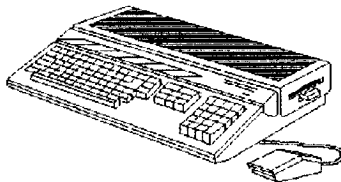
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CURRENT NOTES

Table of Contents

July/August 1991

SPECIAL REPORTS

38 History of the World

The Important Stuff, Anyway--An Atari User Gives His View of Atari History from the Atari 400 to the TT.

by Stephen LaFevers

58 DOS Inventory

A Brief Look at the Variety of Atari 8-Bit Disk Operating Systems

by Charles Cole

66 A History of the Atari ST, I

An Atari Dealer Recounts the Early Years: 1984 - 1987

by Bill Yerger

TIME TO RENEW?

Look at your mailing label. If it has the expression **9107** on the first line, that means your subscription ends in **1991, month 7**, i.e. the **July** issue is your last. Renew ASAP to be sure you do not miss any issues.

The cover: this is, of course, our two-month summer issue and, to honor the occasion, Mike Heininger's camera gives us a peek at "Software Man" resting on his deck and taking a brief break from computing.

This publication is produced using an Atari Mega ST4, an Atari SM124 monochrome monitor and a Moniterm Viking monitor, a Navarone scanner, and the Atar SLM804 laser printer. Most of the output is generated with *Calamus*. Some pages, including advertisements, are produced with *PageStream* and others with *Publisher ST*.

ATARI NEWS/COMMENTARY

Editorial, by Joe Waters	4
Letters to the Editor	6
520ST Recommendation; I'll Stay with Atari; TOS 1.4, Supra 40MB HD; Mac->PC Transfer; 3 Years: No Regrets; Atari to IBM & Back Again; Scalable Fonts & the TT; Pinch pc ditto II; Calamus Text Munching; A Poem	
ST Update, by Frank Sommers	10
Atari's Dealers' Meeting Post-Poned, IBM & Apple Cozy Up, Farewell, H.B. Monroe	
Junkyard Pussycat, by John Barnes	16
Education and Computers	
AtariFest Time	77
Information About Upcoming Atarifests in Your Neighborhood.	

DEPARTMENTS

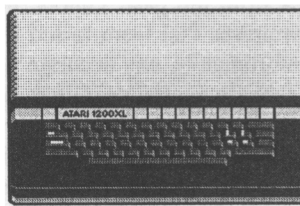
The 8-Bit Alchemist, by Ben Poehland	12
Fragged in the Twilight	
Starting Block, by Richard A. Gunter	20
Informer II: Pics & Data	
Myths and Mysteries, by Dave Troy	22
Fun with Stereo Sound on the TT030 & STE	
Pilot, by Milton Laughland Jr.	28
Part 2: Ins and Outs of Combat Fighting	
ST Toolbox, by J. Andrzej Wrotniak	32
Data Typing 101! Plus: Two Compilers from Goldleaf and the Best Book on Sky Computing	
Public Domain Potpourri, by Brian Miller	52
Demo Programs--An Innovative Form of Advertising?	
Stuck in a Rut, by Sam Wright	62
Quest for Glory I	

PRODUCT REVIEWS

Ecologist and Fractals	
by Jerry Girard	60
Educational software for the 8-Bit. (XL/XE)	
Mug Shot	
by Bill Moes	50
Characters from your dreams, your nightmares, or your reality. (ST/Mega)	
Quartet and Stereo Playback	
by Mike Heininger	42
Is this your Daddy's Rockmobile? (ST//Mega)	
Treasure Trap	
by Don Elmore	48
Denizons of the deep. (ST/Mega)	
Valgus2/Tetrays Wars	
by Frank Sommers	46
Just when we thought it was over. (ST/Mega)	
Valgus~2 vs. Tetrix	
by Raymond Borsick	47
Atari 8-bit Tetris clones. (XL/XE)	

MOVING?

Don't forget to send in a change of address notice if you are moving. Current Notes is distributed via second class US mail. The post office does not forward second class publications; they throw them away.



Atari History,
p. 38 & p.66



Quest for
Glory, p. 62

From the Editor's Desk

by Joe Waters

Some Corrections

Nathan Potechin, of ISD Marketing, sent me a note last month to point out a few errors in the May issue of *Current Notes*. In Frank Sommers' "ST Update" column, he refers to *Calamus* being represented by ICD rather than ISD Marketing. There is, quite often, confusion between the two companies. ICD makes hard drives. ISD markets *Calamus*. We apologize for the mistake and will watch those initials more carefully in the future.

Frank also relayed reports from the Chicago Corporate Electronics Printing Show that claimed *Calamus* was outputting in PostScript. Nathan assures us that *Calamus* was, indeed, turning out impressive finished product, but not in PostScript. Finally, in Bill Yerger's report on CeBIT, Bill estimated that *Calamus ST* would cost about twice as much and have a list price of US \$500. However, the German announced price is dm 1495, which is equivalent to about US \$1,200, not US \$500. Nathan is currently arguing with DMC to obtain a lower price, but he doesn't think it will be anywhere near \$500.

A Little Atari History

We have several articles this month reviewing a bit of Atari history. Stephen LaFevers, a long-time Atari owner, recounts the progression of computers, from the model 400 to the latest Atari TT, from the perspective of an Atari user trying to keep up. Bill Yerger, an Atari dealer (currently in litigation with Atari), focuses on the history of the ST and its software. Bill's article was too long to include in a single issue, so we have divided it into two parts. In this issue, Bill reviews the early years, from 1984 through 1987.

Owners of the Atari 8-bit will enjoy the DOS inventory presented by Charles Cole. Although I do not currently use my 8-bit very much, I do remember many of the DOSs Charles describes. How many have you used?

Some long-time Atari owners may enjoy the nostalgia brought on by these stories from the past. Others, however, may be depressed by the promises that were raised time and again, but seldom kept. Unfortunately, any accurate portrayal of Atari history is going to include missed deadlines, products that never made it to market, marketing efforts that never materialized, and other frustrations. However, keep in mind that the story would be far bleaker if you had purchased an Apple III, or a PC Junior, or a Coleco Adam, or a Texas Instruments computer. And whatever happened to all those CP/M computers? Atari Corp. may have more than its share of faults, but it is still here, it is still releasing new computers, and Atari owners are still enjoying the benefits of a terrific family of machines.

A Little Current Notes History

While we are on the subject of history, let me recall some of the events in our history. This is Volume 11 of *Current Notes*. CN started as a small newsletter edited by Paul Chapin

for the Atari Users' Group of Northern Virginia in May of 1981. The first edition was only six skimpy pages, but Paul's first sentences were stirring: "A new birth is an exciting thing, and a little scary. You never know how much trouble the new arrival is going to cause you, and whether the youngster is going to turn out all right, but the possibilities are bright and exciting."

By November of that first year, the name "Current Notes," submitted by Paul Chapin, was chosen as the winning newsletter masthead. The newsletter, by that time, was going to two Atari clubs, one in Washington, D.C. and one in Northern Virginia; and the name was taken from the titles of the two club reports: "AC/DC Currents" and "Novatari Notes." Paul's reign as editor lasted about two and a half years. In October of 1983, he turned the newsletter over to a new, young editor, Staffan Sandberg. Staffan's first step was to enlarge the size of the newsletter from a 7x9 inch format to an 8.5x11 inch page. His first issue was eight pages. The November and December issues jumped to 16 pages. In February of 1984, Staffan arranged to mail *Current Notes* out as a second class publication. That, however, required a minimum 24-page issue, so once more CN expanded.

In May of 1984, Staffan found the demands of newsletter editor and full-time student too much to handle, so I took over as newsletter editor. The May issue was 28 pages and had a circulation of 400 copies. It sure seemed like putting out a 28-page newsletter every month would be a lot of work, so I established a 10-issue publication year which would give us a break in the summer and at Christmas. And then, we started growing.

By the end of 1984 the issue was 32 pages with a circulation of about 500 and five Atari clubs were receiving CN as their newsletter. A year later, after beginning to accept direct subscriptions, we were up to 52 pages and 2,000 copies. By the end of 1986, CN had expanded to 68 pages and had a circulation of 3,000. The workload had certainly expanded to exceed significantly what was required to put out a user group newsletter, so, in 1987, I formed Current Notes, Inc. to publish the newsletter. By the end of 1987, we were up to 80 pages with a circulation near 4,000, and my wife, Joyce (not a computer fanatic), was pressed into working for CN.

Since then, our circulation has remained relatively stable (in spite of a significant drop in Atari store sales), page size has remained steady at 84-pages, and Joyce now works full time for CN. We have moved to desktop publishing, first with *Publishing Partner* and now with *Calamus*. Last month, we produced our first color cover. We, like Atari, are still here and intend, with your support, to stay in the Atari market and continue improving and growing.

By the way, I noted with interest the Z*Net announcement that *STart* magazine would not be publishing any further issues. Z*Net concluded: "*STart* is the last commercial 'slick' magazine for the Atari in the U.S.A. It will leave behind only *Atari Explorer*, Atari's own house magazine, and newspaper-type publications like *AtariUser* and *ST Informer*." Hmmm, interesting. So far, I have only seen one edition of *AtariUser* and, I suppose, the writers at Z*Net have never heard of *Current Notes*. Perhaps some of our readers will be kind enough to let them know we are here.

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AtariFest '91 is presented by the Washington Area Atari Computer Enthusiasts

Letters to the Editor

520ST Recommendation

Dear Editor,

My thanks to Fred Schumacher for his letter and thoughts on the Atari situation in the USA. It has helped me to clarify my own thoughts and frustrations.

While I remain an Atari enthusiast, I now recommend only the 520ST to others; and that only to people who cannot otherwise afford or justify the expense of some other computer. It is sad to see people spend their entire savings just to do some word processing and a few color games and activities.

The 520ST is the only ST now with FULL compatibility with public-domain software. Of equal importance, the 520's RF port offers excellent color operations on a TV.

One of my primary reasons for buying and recommending the ST over the years is the medium-res pixel design. The ST's designer made the medium-res pixel shaped as a vertical rectangle. This gives amazingly good EGA-quality text readability on the Atari's CGA-pixel monitor. I've seen this on no other computer. Even on a TV-set, the 80-column med-res text is easily readable!

This excellent service from one disk-drive and a TV set, and the great PD software are the only reasons I recommend the Atari to anyone. Frankly, I don't trust Atari Corp. anymore, but their 520ST fills a niche.

One last thought: I'd love to see some of the wonderful ST art done by ST users on the covers of *Current Notes*.

Lauren C. Howard
Charlottesville, VA

[The new 1040 STE seems to currently fill the role earlier played by the 520ST and is a good, inexpensive, computer to recommend. I, too, would like to see some ST artwork on the cover of *Current Notes* and it will appear in coming months. If any CN readers have some nice color artwork (or pictures) they think would be suitable for a CN cover, do send them in. Finding an appropriate cover picture can be a very difficult task! -JW]

I'll Stay with Atari

Dear Joe,

As an Atari owner, I think I have to respond to the recent letter from Darek Mihocka concerning the PC versus ST debate. I recently sold my Atari 1040ST and began searching for a PC to do its work. After spending four months without a computer, I decided to go the route of an Atari MEGA4-STE. To find a similarly equipped PC would have required a 386 with VGA, and then bundling it with Windows 3.0, which would have priced the machine out of my reach (not to mention that I would need software to do my work).

It is true that there are 32-bit operating systems for the PC, but most of them have a price upwards of \$500; some are over \$1,000. Also, you will find that the majority of the "thousands of programs" that Darek spoke of run under the DOS operating system, which is currently limited to 640K of space. There are a few exceptions to this rule that allow access to memory above 640K, but only by page switching and other means that are extremely difficult for programmers to implement properly. Windows 3.0 is itself a DOS application, and does bring with it the need for a fast processor and hard disk to accommodate rapid page-switching for the miracle it performs.

Why should an ST owner go from 4 Meg of addressable memory to 640K? It depends on your needs. If you have a need for PC software, then by all means do so. But, if your ST does everything you need, why spend all of the extra money? (By the way, the reason I came back to the ST was simple. I run a BBS and every PC-based BBS I tried left a foul-taste in my mouth when compared to the simplicity and power of BBS Express! for the ST).

Again, to go the PC route and keep your ST software will require Darek's GEMulator, but from the specs he has printed here in previous issues, it will also require a 386 to function with any type of speed comparable to a true Atari ST. With the power and expandability of the Mega STE's, I think I'll stay with Atari, thank you.

Brian Furbee,
Eagles' Reaches BBS

TOS 1.4, Supra 40MB HD

Dear CN,

In the Atari World, anything over 2 months is a gamble. But I'm sure that *Current Notes* will be here, so enclosed is my subscription renewal, for two years this time. Atari is the uncertainty.

Like Richard Gunter ("Starting Block," April, 1991), I was also in the computer store (IB Computers in Eugene, Oregon) to add a Supra 40MB hard drive to my MEGA 2 system and also used the "while the hood is up" routine to have Bob Burns add the TOS 1.4 ROMS. I experienced the same uncontrolled button reaction on the scroll bars in *PageStream* and other programs.

Run, Do Not Walk, to find BUTT-NFIX.ACC, by the incomparable Charles F Johnson. And it's Freeware. I found it included with the *HotWire V3.0* release that I recently added. It is intended to fix the "double button click" and it does, indeed, do just that! Some other very useful freeware/shareware programs are also included with *HotWire* from the CodeHeads.

TOS 1.4 did add the button click problem, but it also appears to have eliminated numerous other subtle but weird irritants that I used to experience with earlier versions of TOS. Previously, I was not convinced that the \$100+ would be worth it, but my advice now is--Do It!

Based on my experience with the previously mentioned Supra 40MB hard drive, it is a *winner*! It's fast (11 ms seek rate), and has performed well. To those looking at hard disks, don't overlook the SupraDrive 40MB with the Quantum ProDrive. The direct factory price is excellent. See what your dealer can do for you.

Douglas J. Van Sandt
Medford, OR

Mac↔PC Transfer

Dear Joe,

Receiving my copy of *Current Notes* is always a pleasure since it contains so much helpful information and, what is even more precious, coming from such hopeful enthusiasts; many days it helps.

However, a topic rarely discussed, at least from the point of view of a French speaking (and writing) STist is the transfer of extended ASCII charac-

ters: namely the accentuated letters. Transverter does not do it, at least from my experience, and I would be glad to be informed of just how to do it if it can be done (by the way, my system is a Mega 4, SLM804, GCR, Spectre 3.0). An e acute becomes a total different character once transferred. Apple file exchange (which we can now use with Spectre V3.0) doesn't do it either (I didn't see any difference from transverter). Software Bridge doesn't do it either. I wonder how they manage in France.

I thought that within certain applications there could be a transfer done. *WordPerfect* doesn't do it. I didn't try *Word* because I don't have access to its PC version, only the Mac one. *PageMaker* Mac does strange things. Listen to this: when you transvert a text (ascii) from pc->mac, and import it into Mac *Word*, all the accentuated letters are wrongly put. If, then, you import this text, after saving it as a *Word* document, into *PageMaker* (Mac), most of the accentuated letters but one (e acute if I remember correctly) are correct. It is as if *PageMaker* could recognize a marker saying that this was originally a PC text, which *Word* can not recognize--amazing to me. I am certain that things are more simple than that and all of this complication is due to my ignorance, so if anyone could help me I would appreciate it.

Having recently acquired a PC-notebook after a painful disappointment over the STacy weight and price, I was very pleased to read Darek Michocka's letter stating his intention to write a PC-ST Gemulator. He can count on me. If the rumor becomes a reality (that Atari will put out a Notebook with built-in AT-emulation capacity), then I might re-think my plans, but until then...

Which brings me to my last question: Is there a software (associated or not with a PC emulator) that prints correctly and completely on a SLM804 printer? Can we seriously think that the Diablo emulator is sufficient?

Thanks for publishing my letter. I'm hoping that some knowledgeable reader will respond to my questions.

J. Bienvenu
Iles des Soeurs
Qc, Canada

3 Years: No Regrets

Dear Mr. Waters,

...I look forward to receiving my issue of CN every month and usually have it read in a couple of hours. I am not a programmer of any sort, and I rely heavily on you and your contributing columnists to aid me in choosing the right software, hardware, and peripherals to suit my needs. So far, you have all done just that.

My venture into personal computing is probably not unlike many others. When my wife decided to go back to college for her degree, she knew there would be a lot of writing assignments. The old typewriter we had around the house was state of the art in Gutenberg's days. When all the other kids on the block were hunting ducks and rescuing Princesses from Koopas on their TVs, I knew it was only a matter of time before my two kids (and Dad makes three) had to have those same types of experiences. So my search for the perfect solution began.

My brother-in-law was an experienced computer user and owned the Commodore 64 and moved up to the impressive Mac Plus. I liked the Mac's ease of use, great programs, and that mouse thing was neat. But the arcade half of me wanted to fly jets through blue sky and putt on green greens. Then, one day my son said, "Dad, you gotta see uncle Dave's new computer! It's really cool!!" Well, it seems he came across a fellow who needed to unload an Atari 520 and Uncle Dave was happy to oblige.

So there it was. Another computer system to consider. This system was easy to use like the Mac (it had one of those neat mouse things) but it had great color and sound, and the price! So, after more research and reading everything Atari I could find, I purchased a 1040ST with a color monitor and modem from one of the last Federated stores.

Now, almost three years later, do I regret the purchase? No. Even though your magazine occasionally, or should I say often, brings up Atari's shortcomings and faults, I always detect a sense of hope and excitement. As I stated earlier, I am not a programmer. I'm a user and there are more quality programs available than I will ever need. I must admit, though, that it does make me feel a bit more at ease to hear friends with IBM clones say they wish they

were made aware of the Atari machines before they followed the other lemmings off the IBM cliff.

Thanks for your time and efforts. Keep up the good job and I'll be looking forward to another year of informative reading.

Sincerely,
Brad Pfeiffer
Elk Grove, CA

Atari to IBM & Back Again

Dear Editor,

Last fall, I got a new job requiring extensive word processing using *WordPerfect* (WP) on a 386 IBM clone. Though the job doesn't require homework, I thought how nice it would be if I had my own IBM clone in case I had to complete an assignment at home. I felt unfortunate and deprived that my Atari 1040ST and Atari version of WP wasn't compatible with MS-DOS.

Recently, I read some comments in Atari magazines alluding to a compatibility existing between Atari and MS-DOS word processors. In Brian Miller's article in the *Current Notes* April edition concerning Double Click's DC Formatter, he stated that when a disk is properly formatted, it "could be easily swapped between MS-DOS and ST computers."

I contacted Brian because he's local and we're members of the Woodbridge Atari Users Group. Brian explained disk compatibility between MS-DOS and TOS. I then experimented and found some wonderful results I wish to share with Atariland.

I formatted a disk at work in MS-DOS, low density (720K) and took the disk home where I saved an Atari *WordPerfect* document containing underlining, bold, and center codes. I returned to work and loaded the Atari WP document into my WP 5.1. After only a moment, WP converted the file into a WP 5.1 document, including underlining, bold, and other imbedded codes. The IBM WP version accepted my Atari document like a long lost brother. The WP 4.2 version also loaded the Atari document with no difficulty.

I then reversed the process by saving an IBM WP 5.1 document as a 4.2 version onto the MS-DOS formatted disk (WP-CTRL/F-5,3,3). I came home and loaded the document into my Atari WP without any problem.

So there you have it. We can exchange WP documents between an

MS-DOS system and our Atari without emulation. Another fantastic plus for Atari. Try it, you'll like it! PS. Thank you *Current Notes* for making such information exchange available.

Milton Laughland
Woodbridge, VA

Scalable Fonts & the TT

Dear Joe & Company:

To answer Brian Earl Brown's letter in regard to FSM GDOS fonts:

Yes, the scalable fonts can be used to replace GDOS in programs like *Word*Up*, *Easy Draw*, *Publisher ST*, *Microsoft Write*, etc. No updating of the programs is necessary. You can still use GDOS fonts as well but it requires rewriting your ASSIGN.SYS file to include the FSM fonts. FSM GDOS is downward compatible. That's not to say there won't be problems. I believe *Publisher ST* is limited to a fixed number of fonts as is *Easy Draw*, but you will be able to rework which fonts to use with the XControl Panel accessory, though you'll need to restart the program for the changes to take effect. Restart the program, NO NEED TO REBOOT! *WordFlair II* has been retooled to take advantage of FSM GDOS, which means you won't have so much fiddling with ASSIGN.SYS files.

Some people have commented that it sounds like FSM is going to be just as bad as GDOS in setting up. Yes and no. FSM provides a great deal of flexibility as well as potent features for those who have the RAM for font caching. That only naturally requires extra effort, but with the XControl accessory much of the work is done by clicking in the parameters, not retyping lists of exotic names with a text editor. To my knowledge, FSM is still not ready, but when it is ready, it's going to be able to perform with a wide variety of printers.

As I stated in my article in *Atari Explorer*, it's a real boon to all Atari users that FSM is being set up for all STs, not just the STe/68030-based machines.

Using scalable font technology is going to require extra effort for anyone on any platform. If I read your Editorial correctly, System 7 for the Mac is going to provide its headaches to users. Anyone using Windows on a PC knows the frustrations of setting up fonts properly. Despite an old piece of advertising hype, there is a price to power, but that just means get literate with your computer. It's worth it. If Jerry Pournelle

had read the manual for the TT, he may have been more impressed ...

I would like to throw in my comments about the TT030, which seems to be getting a fairly lukewarm reception in the ST journals. This machine SINGS! My productivity using *PageStream* and *UltraScript* has at least tripled. Screen redraws are extraordinary on the PTC1426 monitor and very fast on the 19-inch models I've seen demoed. (By the way, Joe, the PTC1426 is a VGA-compatible monitor, absolutely gorgeous, well beyond the output of an EGA monitor you mentioned in your editorial.) I wouldn't even attempt to use *Calamus* on my Mega 2, but now I'm going to give it more attention. (I promise, my last aside, Joe, what happened to all the hyphens on your *Calamus* pages in the June issue?)

I've used a variety of 386-based PCs with VGA and 19" monitors and I wouldn't trade my TT (or my Mega) for any of them. What about all that software? A lot of that software is &#-!!*. The good stuff all has strengths and weaknesses. But I'd only use one word processor, so it makes no difference that there are maybe ten really superior programs available. They all create files that can be imported or filtered into each other. We have a smaller variety of programs for the ST/TT world, and most of them have copied enough features from the best of Mac and IBM to cool my envy completely.

Stepping off the soapbox, I'll finish this missive with praise for Dave Small's wonderful articles and Joe Waters's continued refinement of *Current Notes*.

Indubitably yours,
Donavan E. Vicha

[Thanks for the info on scalable fonts. I, too, noticed the hyphen problem (after CN was printed!) and haven't figured out just how THAT happened! We now check each finished page much more carefully to make sure no surprises sneak in. The TT, and its monitor, sound terrific. Perhaps if we get another 1000 subscribers, I can afford to get one. - JW]

Pinch pc ditto II

Dear Current Notes:

Where do you think you could get a hardware emulator for only \$10 that could turn your ST into an IBM clone whenever you wanted? Sounds

like a trick question, but I feel like I've basically done just that by finding a cheap way to make my *pc ditto II* work.

As an owner of one of the very first *pc ditto II*'s ever built who had never been able to get it to do anything but crash my system, I decided I would just have to write it off as an unpleasant learning experience. Then, I heard about a fellow who modifies the clip that attaches it to the ST. His PCDITTO PINCH treatment gives the clip a strong Z-shaped grip that makes *pc ditto II* work just fine, and without soldering.

I sent my clip, \$10, and a post-paid self-addressed envelope for the clip to Ed Baumgras, 14 Kidd Kove, Baldwinsville, NY 13027. It arrived back to me shortly with the modification, and I promptly put it in my ST and fired it up.

Bingo! My *pc ditto II* now works perfectly! So far, it has run every piece of IBM software I have. It runs at AT speeds and seems virtually bullet proof.

The board is a bit too big to get inside my 1040ST without bulging the case, but the cables were long enough for me to run it out the back and install it in a Radio Shack "hobby box." Since the box I used is metal, I suspect it provides pretty good electrical shielding. In any case, it works fine and I have experienced no interference at all.

If anyone out there as a *pc ditto II* they have not yet been able to get working, I strongly recommend trying the pinch treatment. Or, if you can even get your hands on a *pc ditto II*, I'd recommend you do it and get it "pinched." You can't beat the price and it worked great for me!

Just think, if Avant-Guard folks had only had Ed Baumgras to help them out they might still be around.

Jack Mathews
Falls Church, VA

Calamus Text Munching

Dear Joe,

Hey, I want to flag your attention about a small weird thing that is happening to my column, and to Dave Troy's, and John Barnes columns as well. Since this only began with your changeover to *Calamus*, I figure it must be related to that.

Calamus seems to be converting "at" symbols (@) into a raised dot. This

is a disaster for people who give INTERNET addresses. In the May issue, check my INTERNET address on p.17. It also looks like the INET address given by the Pussycat for the Atari archive in the text on p.25 may be incorrect, as it does not contain an @ symbol. Oddly, Barnes' INET address at the bottom of p.25 looks OK--but it's a different font! Dave Troy's INET address on p.28 is also screwed up, he got a raised dot (·) in place of an @ symbol, like me.

To my knowledge, all INTERNET addresses must contain an @ symbol, as that symbol gives the location of your INET gateway node in the address header. It's an absolutely critical piece of information; without it, an INET user who types in the incorrect address will have their mail bounced back to them almost immediately accompanied by a cryptic message from the MAILER-DAEMON.

I suggest in the next issue you mention it somewhere, to alert readers us INET guys weren't conspiring to drive INET users crazy if they attempted to contact us!

Regards,
Ben Poehland

Yes, indeed, another font problem. We are using TIME 50 for most of the articles in *Current Notes*. This standard Calamus font has all the normal letters and numbers plus lots of special ones (Ç, ü, é, â, ä, å, ç, è, ë, ì, í, Î, Å, Ê, æ, Æ, ò, ô, ù, û, ý, Ö, Ü, ç, £, ¥, ß, á, í, ó, ú, ñ, Ñ, ã, õ, î, ï, «, », ã, õ, Ø, ø, œ, Æ, Å, Ä, Ö, ·, , , t, °, “, ”, and \$). However, no where in that group of special characters does one find an “at” sign. I was unaware of this, since the @ sign is a normal key on U.S. keyboards, I assumed it would be in the TIME font. It isn't. So, how did I get it in the previous sentence? Well, shift to a different font (Triumvirate) for that character and then shift back to TIME.

To set the record straight, here are the correct INET addresses:

Ben Poehland:
poehland%phvax.dnet@smithkline.com
John Barnes:
JOHNBARNES@ENH.NIST.GOV
Dave Troy:
dtrojh@jhunix.hcf.jhu.edu

A small engineer with the smarts
Lifted Atarian hearts:
Came out with a sac
That ran like a Mac
Till Apple got stingy with parts.

This was the portable's hour;
The STacy was ready to flower.
They thought it would go
But it died at the show
After ten shining minutes of power.

As cash-flow continues to slumber,
Atari gets dumber and dumber:
Executive wienies
All drive Lamborginis
But don't have an 800 number.

“Pay an outside designer? What folly!
We'll do it ourselves, by golly.”
And thus they assembled
A case that resembled
A bedpan by Salvador Dali.
by Dick Biow

PDC = your 1 stop Calamus source!

Attention Calamus users!

<p>Fonts by Guber (Pak 1) - only \$49.95 includes: Clipple Art Deco Bakewell BOISE Boswell Bullwinkle Caligraphy Camelot Celtic Century Chatsworth Classical Crichton Cupertino</p> <p>Fonts by Guber (Pak 2) - only \$49.95 includes: Derwent Fancy Ehangery Future Green Hebrew Manilew Manville Modern Bold Mosel Checks Oblique Old English Old Irish Old Style Peigno</p> <p>Fonts by Guber (Pak 3) - only \$49.95 includes: Pittsburgh PIONEER San Francisco Serpentine Silic Snake Pass Steel Rib Stencil Stillerito Swansong Ultra Illu UMBRA GE half uncial Wolf Trap</p> <p>Mirthful! Fonts - only \$59.95 includes: Carolina Carolina Cursive CAROWIND Taffeta Claire CHROME Mouse Delphyn Opiate RagTime SchoolBook SchoolBook Italic</p>	<p style="text-align: center;">Sizzlin' Deals!</p> <p>ISD Calamus + 46 PD fonts! - \$199.95 Calamus Font Editor - \$79.95 Calamus Outline - \$199.95 Calamus Guide to DTP - \$34.95</p> <p>Cherry Fonts Font Pak #1 to 6 - \$39.95 each</p> <p>Dennis Palumbo Fonts Font Pak #1 to 4 - \$29.95 each</p> <p>MS-Designs (supplies limited!) Font Pak #1 - \$14.95! Font Pak #2 to 5 - \$19.95 each! Font Pak #6 to 10 - \$24.95 each!</p> <p>MegaType FontVerter - \$39.95 Font Designer Plus - \$124.95</p> <p>Safari Fonts Font Pak #1 to 5 - \$19.95 each</p> <p>Spar Systems CalAssistant - \$29.95</p>
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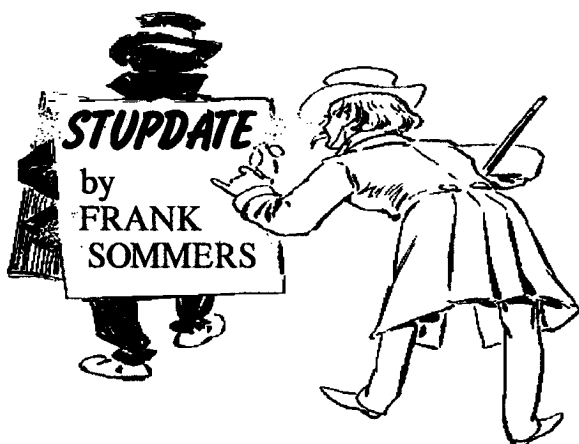
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- ❖ Lists all Calamus Products
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Just
\$19.95!

All fonts for sale in this ad are listed and displayed (with a full alphabet display) in the CFRG. In fact, all Calamus fonts and other Calamus products in North America are listed in this handy reference guide.

Visa/MasterCard not charged until orders ready to ship (no surcharge). Shipping: \$4 per order (Foreign: call). 2nd Day Air: \$10 (Domestic US only). No COD's. WA Residents add 8.1% on total (including shipping). Allow 2 weeks for checks to clear (send money order for immediate processing). Prices, contents, and availability of products in this ad are subject to change without notice.

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US & Canada/Orders only: 800/255-8220, Questions: 206/745-5980, FAX: 206/348-4276



ATARI'S DEALERS' MEETING POST- PONED, IBM & APPLE GOZY UP, FAREWELL, H.B. MONROE

Guys, we want to give you product, but you've got to order it first, a lot of it.

Course Correction

Get your plotters out. Atari is making a few course corrections. Last month we gave Atari big kudos for arranging to fly in dealers to a July dealer conference at their headquarters. We also mentioned that they were now going out to dealers to get advance orders for Mega STe's and TT's so they could "rent" a factory and manufacture some product. On the first count, reportedly, the dealer conference will be for those dealers who will be carrying DTP (in this instance, Direct To Print) software and hardware to tune them up on its intricacies. Since the European software isn't here yet, the conference is "deferred" until the fall. On the advance orders? Advance orders, indeed! Like 1000 orders in the U.S. for Mega STe's or TT's, which are now almost in non-existent supply, or the equivalent of \$1,000,000 in orders before Atari will "turn on" one of its Taiwan factories.

A New Credo

For those of you who missed it in last month's issue where it was buried in letters to the editor, CN has a new "horizon" to strive toward. It was divined by Mort Lipton of South Hampton, PA. We have taken his words to heart, cast them in bronze and shall aspire to fulfill them: "I am a serious yet highly readable journal that teaches, critiques, and doesn't suck up to advertisers. I will [try to] capture your interest by what I have to say and not try to divert or massage you with a lot of "cutesy pie" gloss. I am easy to read. My print is large and clear on a non-glare semi-matte paper. Oh! don't think I am not an admirer of things beautiful and the technology that creates these wonders. It's just that my mission is different and I suspect that my readers are too."

Suddenly, There It Was

You've dashed into Toys R Us to grab a squirt gun that shoots 40 feet for your nephew (and maybe a couple of shots at your loved ones before you ship it off to him). Then, wham! like an NFL line backer sacking the QB, it hits you. There with the Nintendo Game Boy and Sega's new color portable, called Game Gear, is the Lynx!

You'd heard that it was the only Atari product that turned a profit in the U.S. last year, and now you have glimmerings of why. It's been marketed. Advertised and marketed, and is price competitive. The Game Boy price tags signals \$89.99, and Lynx's \$99.99. True, Game Boy's cartridges are an average of \$5 cheaper than the \$39.99 for the Lynx, but one's color and one's not. And there in the middle is Sega, with a hefty \$50 more in price; cartridges are the same. And what is the Sega like in comparison? Color, but not

even as sharp as the Lynx. The attendant tells you that the "regular man, who's off today, say's the Lynx is the best of them all." Then a few feet further down the display you see a NEC Turbo Express handheld game machine. It's about the size of the Lynx, but costs a whopping \$246. Must be something for the extra \$ hundred and a half. He hands it to you, and the color is sharp, but the program is Mario Brothers. You ask about additional software and that's where it all falls apart -- the beauty of the Lynx, that is. It has circa 10 programs in the store for sale. Sega has four dozen and the new NEC Turbo Express has about twice that, covering an entire wall. Game Boy, black and white and who cares how many games it has, doesn't even come into contention, in your mind. Except that it sells on the average of 20 to 1 to the Lynx because of the image Nintendo has created for it.

It Was a Dark and Stormy Night

It was the Monday after the big parades in Washington and then New York, celebrating the amazing way all of our weapons had worked their wonders, destroying Iraq's life support system in the Gulf war. Rain drizzled down and there were two of them. They moved slowly down the dark toward the entrance way of a big building. If you had let imagination run free, you could see them going somewhere to plot a "mugging." Just the angle of their hats and the cant of their walk, told you these were "pro's," who had tired of warring with each other and were now going to join in "frying somebody else's eggs."

The city was Armonk and, as the door closed behind them, high above you could read and realize this was IBM's New York headquarters. But who was the other guy, also in a trench coat? And when they exited, cold as you'd become, standing in the shadows and the rain, you knew. It was Apple!

That left only the question of who was going to get shot up. But like always, if you let it come to you, it always did, and this time was no different. Sure, they were going to get into that newest of new things, "a strategic alliance" and swap high tech items, like Mac-Intosh software to enhance IBM's OS/2 operating system and the about-to-be latest IBM chips to give Mac a new and even higher speed machine. "Why?" you asked yourself, without moving your lips, your gun cold in its case against your ribs. Because Microsoft, as the Apple man would tell you, is a main rival to his operating software, and now with Windows is even more of an annoyance. And IBM? Sure, Microsoft designed MS-DOS for them, and then sold 50 million of 'em. But the IBM guy don't need Windows competing with his slow selling OS/2 system. So, why not a

"back alley" job. A couple of shots in the dark to let Microsoft know who the new bosses are going to be. And why not? Maybe they come out with a new joint-machine that would knock off the clone gang and return the territory to its real owners. Why not?

Reaching Out to Touch Someone

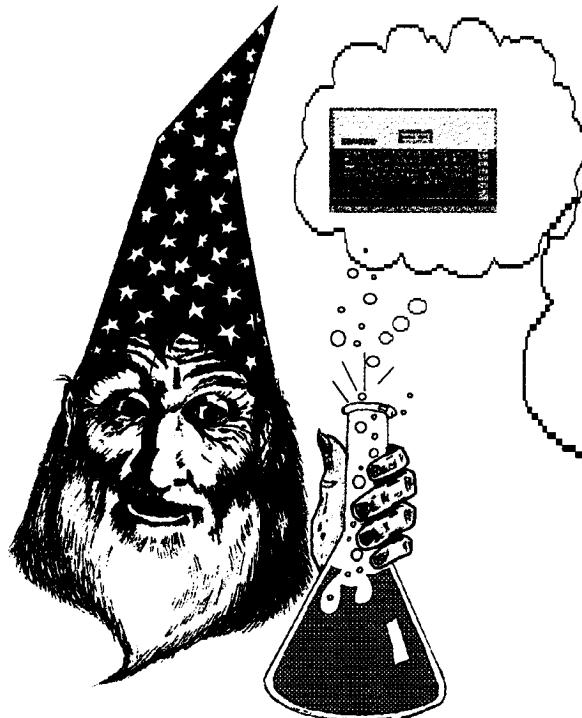
Everyone agrees. Nintendo has a lock on the computer game market, despite the competitors mentioned above. But that's just a simple monopoly, rightfully earned by hard driving, thoroughly pervasive, marketing and advertising. Had you thought of how they might expand their reach? They have. Up to now you and your family have been playing Nintendo games in the bosom of your family, night and day of course. But how about having all 28 million Nintendo game machines connected with each other. That would be a network in the truest sense of the word. No sooner thought of than done, or at least launched.

For the past two years, Nintendo has been dreaming of what is required to do the job, and decided that modems added to existing slots in the machines would do it. But if you're going to have a set of central computers in place to receive calls for the latest game to be put up on the caller's screen for a one-time play, what about other things, like an electronic brokerage service, or shopping or other services? Well, such a small network already exists in Japan, and people in this country are "drooling" at the thought of buying into one third of the homes in the country, where the 28 million machines are located. Listen in the fall. Nintendo will make the decision this summer, whether to reach out and "touch" everybody or not, in an on-line computer services market with sales now approaching \$600,000,000.

Celebrating H.B. Monroe

Wadesboro, North Carolina lost a beloved member of its community on 12 June and Current Notes lost a dear friend and author, the first of our lot to make the crossing of the bar. Horace B. Monroe, 70, died of a migrating, non-malignant tumor which had been battling him all his life, or since he lost his leg in an air crash in WWII. President of Anson Community College, until he retired several years ago, he was known as a gentle man, honest to the essence, defiant in the face of snake oil specialists and others of the breed, including our high politico's. He told it, always like it was, and thus had the respect and affection of all those who knew him. He is survived by his wife, Hazel (422 Lee Avenue, Wadesboro, N.C.) and many memories of a most genuine and loving individual.

Hats off, H.B., wherever you are!



the 8-Bit Alchemist

by Ben Poehland

Fragged in the Twilight

Stirrings in the 8-bit world continue to occupy my attention, both personally and in my capacity as one of the last remaining channels of news and info for 8-bit owners. As the entire Atari market in the USA continues to contract, events on the 8-bit scene appear to me to be driven more by the scrambling for position by the remaining market participants than by new and exciting developments. That's not to say there aren't new exciting things happening; only that, for the moment, the neat stuff happening seems a flash in the pan set against a background of continuing downward market spiral. More than any other segment of the computer market as a whole, we Atari 8-bitters appreciate the value of the few remaining sources who valiantly continue to service our needs in the market. And most of us, older and wiser now that our market has practically vanished in the Twilight, have finally realized (to our deep regret) how truly devastating software piracy can be to a small market like ours. It is, therefore, especially distressing to see yet another virulent case of piracy appearing in our midst: a heartless ghoul hell-bent to suck the last drops of blood from a market with precious few corpuscles left. Even more distressing, that *Current Notes* and *The Alchemist* might have unwittingly aided this particular pirate. But before I get into all that, I have some more positive events to relate.

Newsbytes

I suspect most of you were unaware your Alchemist wasn't a member of a user group. Yeah, embarrassing. I'm overjoyed to report that situation has now been rectified. The Ol' Hackers Atari User Group, Inc. (OHAUG) in Oceanside, N.Y. has adopted

this old Alchemist by conferring upon me a complimentary membership, which I was deeply honored to accept. To Alex Pignato, Al Atkins, and all the rest of you Ol' Hackers, my deepest thanks and warmest wishes! It is all the more gratifying to me that OHAUG, an 8-bit only group, is requesting affiliation with *Current Notes* and soliciting subscriptions from its members. In these days of generally declining magazine sales, it looks like Joe Waters will have to fire up his database and add a new user group name to the CN list!

With my newly recruited Review Staff now in place, I'm managing very well in spite of the almost zero response (thus far) to my appeals in this column for review samples of 8-bit software/hardware from distributors and developers. (It's still not too late, you guys!) Some truly excellent manuscripts are now coming in and will soon grace the pages of CN. Of particular interest was a report I received from John Pilge, who attended the Atari stockholders' meeting on May 14 in Sunnyvale, CA. John reported the following highlights:

- * Atari made over \$14,000,000 profit in 1990.
- * The XE is still in production and is being marketed in South America, Eastern Europe, and the Middle East.
- * Only 6% of total Atari sales were in the U.S.; 86% of sales were in Europe.
- * Atari's annual report carried a reference by Sam Tramiel to a "desktop game machine in 1992," but Sam declined to comment on it at the meeting.

I say "almost zero" response, because I just this day received--are you ready for this?--a review sample of a brand new piece of *commercial* 8-bit software!

LJK Enterprises, the company that brought us legendary programs like *DataPerfect* and *LetterPerfect*, has undertaken a fresh foray into the 8-bit market with *Movie Credits 1.0*, a nifty little ditty that lets you enhance videotapes by adding header and trailer titles made up of a combination of text and graphics. LJK advertised the new offering briefly in the April *CN* with a special introductory price of \$19.95 that ended May 31. I'm hoping The Alchemist can persuade them to extend the introductory price to *CN* subscribers. If all goes well, we might see a review of *Movie Credits* in these pages as early as the September issue. Stay tuned!

Software Infinity (642 E. Waring Ave, State College PA 16801) has released nine new games for the Atari 8-bit, apparently European imports. The games are *Zador*, *Drag*, *Sogon*, *Zebu-Land*, *Dredis*, *Techno-Ninja*, *Cultivation/Chromatics*, *Oblitroid*, and *Tobot/Bros*. Now really, who says there's no new software for our favorite machines?

Now <heh>, here's where The Alchemist finds out how many ST owners read this column. Considering that my mail is increasingly peppered with inquiries from ST owners, I reckon it's time for me to reveal the dastardly secret I've scandalously concealed for the past six months: The Alchemist has acquired an STe. Not altogether inappropriate, considering that 8-bitters with ST's in fact constitute a majority among 8-bit owners in *CN*'s subscriber base. You old-timers out there, have no fear you've lost me to the ST! My five 800XLs are still my workhorses, and I'm continuing to expand my personal 8-bit hardware and software collection. Anyway, for you ST owners with a penchant for hardware hacking, you might want to consider subscribing to *Elektor Electronics USA* (305 Union St., Peterborough NH 03458). Published by Edward T. Dell (an acquaintance of mine), *Elektor* is basically an electronics magazine with a heavy European flavor. The reason I mention it here is because so many issues seem to contain do-it-yourself hardware hacking projects for the ST. For example, the June issue features an impressive real-time clock project for the ST, with pre-etched circuit cards and parts available through the magazine. Now, if only I can get this guy to publish some Atari 8-bit projects.

Computer Software Services of Rochester N.Y. has apparently changed hands. Looks like Ron Bryant, the former owner, just burned out and has transferred the company to Bob Puff. I'm personally very favorably impressed with Mr. Puff and hold high hopes for the future of that company. I regard Mr. Puff as the single most talented 8-bit programmer in today's 8-bit commercial market. And to my knowledge CSS is probably the last company actively developing and marketing new hardware upgrades for Atari 8-bits. Things up there are a bit chaotic at the moment what with physical relocation and the change in management, but we

should all wish Bob well in his new endeavor.

On a somber note, for the past several weeks rumors have been flying thick and fast regarding the imminent demise of *STart/ANTIC*. I haven't verified either the sources or details of these rumors, but coupled with the fact that I haven't yet received my expected latest issue it's more than enough to give me the jitters. One rumor claims *STart* has gone belly-up and is no longer publishing, another version has it the magazine is being sold off. Whatever, when combined with the alarming reductions in both editorial content (especially 8-bit material) and publication frequency over the past year, the prognosis looks bleak. Is it time to brace for yet another round of market contraction?

Twilight Sources

If you are on the long and frustrating road to an 8-bit hard drive, here's something that might help you along: *Timeline Inc.* (1490 W. Artesia Blvd. Gardena CA 90247 orders 800-872-8878, in CA 800-223-9977, tech info 213-217-8912) is selling Adaptec 4070A (RLL) or 4000A (MFM) SCSI controller cards for only \$60 each. Sheesh, I wish I had known of this outfit last December. No matter, my hard drive project is pretty well stalled for the rest of this year anyway.

I just got the *Best Electronics Rev. 9* catalog a few days ago. Wowzers! It was a long wait, but Brad Koda is really getting his act together. No more of those loose pages stapled together like before. This is 48 pages of slick-covered DTP-produced goodies for virtually everything Atari ever made. Including printed order forms! If you own anything at all made by Atari and aren't on the *Best* mailing list, someone should place a bucket over your head and play you like a bongo. (2021 The Alameda Suite 290 San Jose CA 95126 408-243-6950)

B&C Computervisions must be in cahoots with *Best*; their summer 1991 catalog arrived about the same time and is also vastly improved along the same lines as the *Best* catalog (I wonder if they use the same printer?). Only the new *B&C* catalog is bigger--58 pages--of which 50 pages are devoted to 8-bit goodies. If you own an 8-bit and aren't on the *B&C* mailing list, see my comments in the preceding paragraph RE: bongo-playing. (3257 Kifer Rd. Santa Clara CA 95051 408-749-1003)

And last, but certainly not least, another excellent source of 8-bit PD software is the *MAPDA* catalog from Steve Hoffee (*MAPDA-USA* Branch, 333 Peninsula Drive, Lake Almanor CA 96137). *MAPDA* stands for "Munich Atari Public Domain Association," an Atari 8-bit club based in Munich, Germany with several branches in other countries. The *MAPDA* PD catalog is disk-based, like the *Vulcan* and *Edwards* catalogs. Software listings have a heavy European slant; most programs are in English, but some are in Ger-

man. Categories are games, demos, teaching programs, magazine disks, languages, paint programs, telecom, print utilities, wordprocessors, music, and X-rated graphics. Disks are dirt-cheap at \$2.00 each, with a \$3.00 shipping charge for orders of fewer than 30 disks. The overall listing is not quite as extensive as Vulcan's, but with its content of imported items this catalog sports a number of titles I've never seen before. Drop the man a postcard; ask for his catalog; tell him The Alchemist sent you.

Fragged in the Twilight

During the Vietnam War there were significant advances in grenade technology; the fragmentation grenades used by both sides were particularly nasty concoctions that produced horrible wounds. A soldier injured by such a weapon was said to have been "fragged." By the end of the Vietnam Era the term "fragged" had acquired a darker, more sinister connotation. It was rumored that in certain units of U.S. forces where morale was particularly low, an officer who had a reputation for exposing his command to the enemy too recklessly might end up getting "fragged" by one of his own men. Shrapnel being rather difficult to identify, in a mix-it-up firefight who was to say whether the lethal fragments came from the weapon of friend or foe?

If you've been following this column for any length of time, you already know the significance of Twilight. For you newcomers, beginning with the December 1990 *CN*, The Alchemist has been profiling mailorder sources of 8-bit goodies in what I dubbed the "Twilight Market" that now services our needs, since walk-in storefront sources have essentially disappeared. Since that initial December article, which contained about 17 mailorder sources in the 8-bit Twilight Market, I've continued to profile additional vendors each month under the "Twilight Sources" feature of this column. Altogether I reckon I've exposed 25-odd mailorder sources in these pages, the most comprehensive such list ever published in any existing Atari 8-bit support magazine.

I never went to Vietnam, never even served in the Armed Forces (recruiters look at my health profile and start laughing), but I'm now certain I know what it must feel like to be "fragged." You see, rummaging around in the Twilight is one of the things alchemists love to do. But nobody ever warned me it was possible to get fragged in the Twilight. By one of my own Sources, no less.

Huber Pulls the Pin

In the June 1991 issue of *CN*, there appeared an excellent review of *ChessMaster 2000* by Bob Berberick. Although I have a dour attitude toward video games in general, I confess to a soft spot for computer chess games. When I first received Bob's manuscript,

I was so impressed with his description of the program that I purchased it myself from American TechnaVision. An excellent commercial software package, it only cost about \$13. It was everything Bob said, and then some. I was very happy with the program and positively delighted to submit Bob's review to Joe Waters for presentation in these pages.

Around the end of May, maybe 4-5 weeks after I had received *Chessmaster 2000*, I received the latest edition of the DataRush catalog. DataRush is a PD source I had profiled back in my December article; this distributor is owned by one Walter Huber and was doing business using his own name, Huber, back in December. Huber/DataRush sold the usual collection of 8-bit PD items, but also offered copies of commercial software from companies that had gone out of business or had completely withdrawn from the Atari 8-bit market.

Now folks, I'm a chemist, not a lawyer, and though I might have had a few personal doubts about the legality of Huber's operation, it was my feeling he seemed to be providing a useful service without causing obvious harm to any programmers still active in the market. And besides, Joe Waters was printing penny ads from Huber/DataRush in the back of *CN*, and everyone knows JW would never accept ad copy from a software pirate.

I receive numerous catalogs from many different Twilight Sources; they are, after all, the lifeline of information that feeds this column. When a new catalog arrives I've been known to set my other mail aside and go into a kind of frenzied trance as I page through the latest compendium of 8-bit goodies. So it was when I examined the new LL catalog from DataRush. My pulse quickened when I noticed the new catalog was much thicker than previous listings, with many new additions. Then I got to page 5, under the 8-Bit Backup Software Section, the section of the DataRush catalog listing about 750 titles of supposedly discontinued commercial software offered as "backup copies." Three-fourths of the way down the page a familiar title caught my eye: *ChessMaster 2000*.

I never heard the faint pinging sound as the pin was pulled on the frag grenade. But something definitely exploded. I remember the shock, the feel of something like red-hot shrapnel ripping my flesh, stinging my face.

DataRush: A Catalog of Pirated Software

Stupefied, I stared with disbelief at this offering for a pirate copy of *ChessMaster 2000* for only \$4 (\$6 with docs).

I recovered myself, began to think. Well, it must be some mistake, an oversight, right? With so many listings, it was possible something that didn't belong there had accidentally slipped in. Of course, that must be it. Anybody can muff up once.

But as I continued to page through the DataRush catalog I was repeatedly horrified to see current, readily available commercial software titles on just about every page. Dozens of them. Commercial programs I have purchased myself from legitimate dealers within the past 18 months:

- * Alpha's *Schematic Designer*, purchased on sale from Chameleon Software for \$18 in March 1991.
- * ICD's *SpartaDOS Toolkit*, purchased in December 1990 from ATV for \$27.
- * Springboard's *Newsroom*, purchased for \$15 from San Jose Computers in January 1990.
- * Atari's *DOS XE*, \$10, and ANTIC's *Ram brandt*, \$17, both purchased from Home Computer in Philadelphia in August of 1990.
- * Alpha's *Magniprint*, purchased directly from Alpha Systems as part of the Computereyes package, April 1990.
- * Hi-Tech's *Print Power*, purchased from Best Products for \$20 in March 1990.

I could go on with this list, but you get the point. And, besides, it's making me sick. What a dope I must have been to pay full price for all that software, when I could have gotten my wares from Huber for a song.

By the time I reached the last page of the DataRush catalog, I was fairly trembling with the cold fury and righteous revulsion that characterizes the vengeful wrath of an enraged Alchemist. That I could have ever given my endorsement to such an abominable enterprise was anathema to me.

The scientist in me still rejected the notion that this man, upon whom I had conferred blessings and recommendations in these very pages, could have so completely betrayed my trust. An experiment had to be performed to confirm the hypothesis. Whereupon, on May 31 I wrote out an order to DataRush for a mess of PD and commercial "backup copy" software, \$52 worth. However, the commercial programs I ordered, were stuff I already had. About a week later I received my wares by Priority Mail, accompanied by a pleasant letter from Mr. Huber complimenting me on the 8-bit stereo articles in the May issue of CN.

As I opened the package I hoped/fantasized the contents would be an assortment of shrink-wrapped commercial disks, somehow offered at fabulous discounts. Nope. All copies, on Nashua brand diskettes. Xeroxed docs accompanied *AtariWriter+* and *Chess-master*, minus the copyright notices. The final straw was the on-disk docs for *SpartaDOS Toolkit*: a blatantly plagiarized copy of the printed *Toolkit* manual, minus ICD's copyright notice. With my disgust for DataRush rising exponentially, I could no longer ignore this man who masquerades as a legitimate software dealer and who has apparently convinced himself (and other people as well) the masquerade is real.

It is my opinion that Walter Huber operates an illegal software distribution organization known as DataRush. As such, he is in direct competition with all the other legitimate software dealers that I have profiled in this column. It is my opinion that if Mr. Huber continues to conduct business in the manner I personally experienced, then he must eventually drive all the legitimate dealers from the market. No programmer in his right mind will ever write another Atari 8-bit program, and the few developers we have left will abandon us in disgust. I don't want that to happen. Which is why I am revealing this painful episode in these pages, for all to see.

Aftermath

First, to those of you who are loyal followers of this column, I offer my deepest apology. I shall never tolerate software piracy in any shape or form, and would never have endorsed Huber if I had known his true colors. While his earlier method of business could have occupied legal minds arguing in the grey areas of the law, with his latest catalog there is no doubt in my mind that he has clearly stepped over the line.

I hereby withdraw any recommendations or endorsements I ever gave to Mr. Huber or his business. I recommend readers avoid doing business with DataRush. I recommend that our Publisher not accept ad copy from Huber/DataRush. I recommend that no magazine or on-line service anywhere carry his advertising.

I notified Tom Harker, president of ICD Inc. that DataRush was offering copies of ICD software (*SpartaDOS 3.2d* and *SpartaDOS Toolkit*) for sale. Mr. Harker was clearly not pleased by the news and indicated ICD has never authorized DataRush to distribute ICD products in any form. He also indicated ICD is looking into the matter.

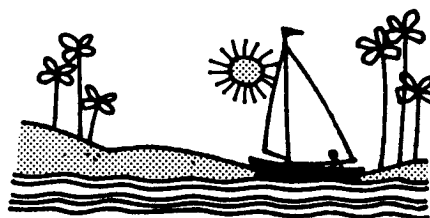
I notified Bob Brodie at Atari Corp. that DataRush was offering many Atari titles, more than I could identify by myself. As of this writing I have not heard back from Atari. It is my fervent hope that Jack Tramiel will have someone in Atari's legal department contact DataRush and encourage Mr. Huber to adopt a different occupation.

And most especially, I hope I shall never write an article like this again.

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The Junkyard Pussycat



by John Barnes

Education and Computers

Computers in the Classroom: Success Or Failure?

Recently, as the Pussycat has scanned the morning paper or as he has leafed through the pile of magazines that flowed through the mail slot, he has become aware of substantial concerns regarding the role of computers in education. The question can best be phrased as, "If there are so many computers in the classroom, how come our kids are not learning more?"

In the early '80s one could detect a certain euphoria as educators found that computers were almost affordable. The machines were perceived as being infinitely patient. Perhaps, they could relieve the teacher of much of the tedium of drilling students and recording grades. Nowadays, many of these computers are found to be gathering dust, and others are being used in ways that do not fit the preconceived notions.

That computers of that era should have gained a certain appeal is not surprising. Educators have, after all, been searching for new ways to impart knowledge since the dawn of time, and each new idea has had its day.

That skepticism should be surfacing now, as computers are reduced to commodities, is also not surprising because each old idea must be reexamined before it is put in its proper place.

The most successful approaches appear to treat computers as tools for accomplishing certain kinds of work: word processing, mathematical modelling, etc. However, a tool loses its value if it is not available when needed, and this is a major dilemma for public school systems. There is simply no way that schools are going to find the means to put a computer on every desk. The impact of such a move on the curriculum, not to mention the architecture of the classrooms, can only be guessed at.

"Computer Literacy" was a notion that was thought to have some abstract value of its own. We now know that only a tiny elite needs to possess an intimate understanding of computers and the way they work. A baseline level of computer literacy seems to be synonymous with the ability to operate a few selected applications. Word processing programs, spreadsheets, and simple databases have evolved to the point

where they require less specific knowledge. The fear that an errant keystroke will send the whole machine off into never-never land has largely disappeared.

The Dangers of Obsolescence

Keeping up with changes in hardware and software on a limited budget poses additional problems for school administrators. Back in about 1982 or 1983 the Fairfax County Virginia school system installed 8-bit Atari computers in their classrooms. At the time this looked like true "power without the price." Many of these are still used in word-processing labs. However, it has proven to be cheaper to replace broken computers with 65XE's than to repair them. How long will it be before these machines wear out, and what will replace them?

New software releases and upgrades to old ones are appearing at a rate that does not give teachers a proper chance to learn the new products and evaluate them for classroom use. The costs of purchasing the upgrades are also substantial. Networking is an essential component of many school computer labs because it allows for printer sharing and file servers, thus enabling students to move from one workstation to another. This technology is complex and changing.

Bureaucratization

Given relatively large numbers of machines, scant knowledge of their use and care, and a requirement for standardization, it is inevitable that committees should spring up to address the problems. School systems have shown a considerable talent for building bureaucracies in the past, and computers in the schools have generated their share of regulations, paperwork, and demands on the teachers' time.

This bureaucratic process introduces a considerable lag time into the school systems' response to new technology, thus aggravating the obsolescence problem.

Citizens everywhere also feel that teachers should be in classrooms rather than committee rooms or regional offices and, in the current tax climate, they are bringing fierce pressure to bear on administrators and elected officials.

Process Ideas, Not Words

In any society, an educated person is one who possesses and can manipulate some basic set of ideas and symbols. Ideas include such things as the meaning of words, the structure of thought, notions of quantity, a concept of time, and some understanding of ethics, to mention only a few essential ones. Basic symbols include words, numbers, shapes, smells, etc.

A person who is sufficiently familiar with this knowledge base can cope with the demands of society. Those with a more sophisticated grasp can change society.

Given this definition of education, it is obvious that the computer can play no more than a passive role in fostering the development of an educated person. The computer is, once again, useful only as a tool.

Public educational systems need to provide inspiring (not merely competent) teachers, sound curricula, and an environment conducive to learning before they worry about providing more computers in the classrooms. The pussycat sympathizes with educators, who now find themselves way down the list as providers of ideas. Television, music, shopping centers, street corners, and even computer games put all kinds of strange ideas and symbols into young minds, often without any relationship to the teacher's input.

Educators get so little of their students' time and there are so many more important forms of knowledge, that cluttering the curriculum with arcane exercises in learning about computers somehow seems wasteful.

New Computers for Classrooms?

On the other hand, computers should be made available to students as replacements for typewriters and desk calculators. It might be appropriate to design machines to meet the special requirements of such use.

The workstations in school computer labs or classrooms need to be compact and lightweight. They do not need modem ports, printer ports, or built-in hard drives. They do need networking capability along the lines of twisted-pair Ethernet so that they can share a good printer and download from a file server. They need enough memory (8 MB or so) to handle graphics intensive applications and their processors and networks should be fast enough to deal with youthful attention spans. A plug-in ROM cartridge could replace the floppy disk drive for booting purposes, with the major part of system configuration occurring from the network. The processor and ROM-based operating system should be chosen from a family that has a broad base of existing software.

The Pussycat foresees a requirement for at least a million such workstations and a hundred thousand or so compatible file servers. A target price of under \$1000 seems feasible for the workstation, even with a color display. The file server does not need to be anything fancy, and it should be possible to build one for \$4000 or so, perhaps including a CD Rom drive for the storage of courseware. The modest storage requirements assume that the selection of material maintained will be closely tailored to a curriculum in which the computer is used as a teaching tool rather than a research tool.

Perhaps one of the university computer science departments can come up with a prototype that some manufacturer of computer appliances could mass produce.

"Apples" for the Students

Each year the two major supermarket chains in the Washington DC area seek to exploit the desire of parents for more computers in the classrooms as a marketing tool. Register receipts can be turned in to school authorities who then use them as scrip toward the purchase of computers, peripherals, and software packages.

The pussycat finds this to be a scam. The redemption value is approximately one percent of the face value. The sources of computers are limited because only Apple and IBM participate in the promotions. It seems that a school needs to collect about \$160,000 in register receipts to get an Apple IIGS. A school of 350 students could perhaps earn one computer and a few software packages in the course of the promotion.

Schools in suburban fat cat districts are naturally more successful in this because these folks spend more at the grocery store. Some people have recognized the inequity of this and have begun to pool receipts for disadvantaged schools. In any case, the number of computers supplied by this route would not seem to go very far toward meeting the demand.

Since Mr. and Mrs. Pussycat do not have any children, the picture of a harried teacher adding up pink grocery receipts is purely an imaginary one. The Pussycat would love to hear from school teachers with personal experience in this area.

Johnny's Computer Goes to College

A few years ago, some institutions of higher education sought to make sure that every student had access to a computer by requiring that each student bring his own. The trend seems to be away from this toward giant campus networks with university-owned terminals everywhere, a higher horsepower version of the one advocated above for public schools. Many students do, however, bring their own machines along to do word processing, spreadsheets, or database work.

Modern word processing software surely makes cutting and pasting other people's ideas easier than ever. I hope that my old freshman English teacher, who insisted on handwritten class assignments, is spinning in his grave.

In some few educational institutions the computer is more than just a tool, it is an integral part of the learning experience. MIT's Project Athena, for example, gives students access to a vast array of very nice machinery from DEC, IBM, and Next. In these cases research is perhaps as important as teaching. The (optional) computers that students bring with them are mainly used as terminals so that the students can access the campus facilities from their own apartments and avoid the crowds at the campus terminal clusters. Some computer manufacturers put a lot of money into such projects in the hope of getting a jump on the next generation of computer users.

Some few colleges still require students to bring their own computers, in which case they may restrict the choice of personal computer so that they can make use of special software modules as part of courses (courseware). In most cases, however, it is likely that the computers are mainly used for word processing, spread sheets, telecommunications, and simple database work.

These trends are likely to continue so that most future college graduates will find computers as much a part of their lives as their briefcases.

Idea Processing 101

If the knowledge base gained from the public school is designed to give the student basic tools for coping with society, then we might expect that college and university students would gain the means of advancing civilization.

Perhaps the Pusycat is being overly nostalgic when he recalls seminars and bull sessions where people did nothing but talk, question, and argue. This form of learning has come to be known as the Socratic method, and it has been a crucial component of the education experience for over 2 millennia. Will the computer change this style?

The keyboard and the screen do not promote Socratic dialog in real time. The tendency in online roundtables or chat sessions is toward the short and pithy--more like a "sound bite." If college students are able to find fulfillment at their keyboards rather than through interaction with their peers and their mentors, we must count the computer as an intruder.

If, on the other hand, the machines can be kept in their rightful role as tools, we can hope to harness their ability to shuffle text and numbers to explore more meaningful relationships among ideas. This would appear to be most relevant to the training of engineers and scientists. It is here that we find the most effort in the development of courseware. Here also is the Socratic method modified to include the building and testing of quantitative hypotheses. Questions are answered by graphs and tables of numbers.

One of the most useful approaches is through the use of spreadsheets to evaluate mathematical expressions or to solve simple differential equations. The procedures needed to set up a model in such an environment are quite simple and a simple graphic output allows the student to explore a range of parameter values. Spreadsheets are also good for statistical analysis and model fitting in a wide range of other disciplines.

Canned simulations can be useful in visualizing the effects of more complex processes, and the Pusycat wishes that they had been around to liven up lectures when he was a student. Software tools like Mathematica are useful because they can allow the student to check mathematical processes that are quite tedious to carry out on paper.

Everyman a Programmer

In the early days of classroom computing it was assumed that the only way to use a computer was to program it. There was some truth in this because there were only a few packages for carrying out office automation tasks. Courseware was practically nonexistent. The people who tried to write their own programs for use as adjuncts to classroom teaching soon discovered the truth of Andrzej Wrotniak's maxim that "The population of the world is divided into programmers and others." Just as some people can never learn to play music, others can never learn to program computers.

Illinois State University, located in Normal, IL, has taken the stance that all of its undergraduate physics majors need to be more than just computer literate; they must understand computing in some depth and they must be able to use computers to solve a variety of problems in physics. As part of this process they are required to learn to program in FORTRAN. Three members of the school's physics department describe their experience with this approach in the May/June 1991 issue of the journal *Computers in Physics*.

The authors describe the technological changes in CPU speed, networking, and mass storage that have brought powerful computers onto desktops. Their approach to integrating computation into the physics curriculum was guided by three principles:

- 1). Students should be in control of the technology, not the other way around.
- 2). The computer should enhance the student's acquisition of broad problem-solving skills.
- 3). The computer should: (a) stimulate a re-ordering and broadening of the subject matter taught; (b) build physical intuition; and (c) enable the student to pursue independent study.

The first principle establishes the position that the student must learn to program rather than to rely on canned programs produced by others. This has great value in emphasizing the role that assumptions play in the outcome of simulations and how the discrete character of computer arithmetic plays a role in determining the accuracy of calculations.

Some assignments require the students to code their solutions to problems from scratch, while others make use of a Software Toolbox, which contains basic modules that can be incorporated into student-written shell programs. Presumably, this enables the students to sharpen their intuition without having to reinvent the wheel.

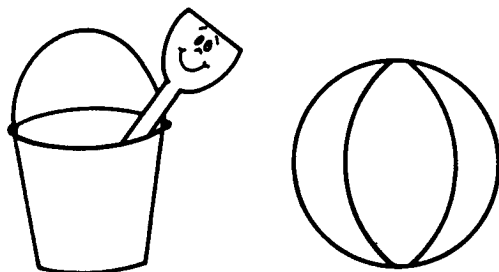
One benefit of the numerical approach to physics education is that it allows the student to solve some quite complex problems long before he acquires all of the mathematical tools that are needed to appreciate the closed-form solutions. The numerical approach can also be used in cases where closed-form solutions

are unavailable, thus permitting better exploration of more realistic models of physical processes.

This curriculum is more structured than the above description indicates. A lot of preparatory work has been done to identify places where computation is important, assignments related to the available tools have been developed, and documentation has been written to ease the student into the computer labs.

The surface has barely been scratched in this area, but it is not too much to expect that some of this effort will filter back down into the public schools so that future students will have a better understanding of the world around them.

While the Pussycat would like to live his next life in a future where aspiring scientists have much nicer toys, he does not regret the days that he spent damming creeks, dissecting clocks, and manufacturing gunpowder as a child. There is no substitute for hands-on experience of the forces and curiosities of nature.



Apprentice Software presents

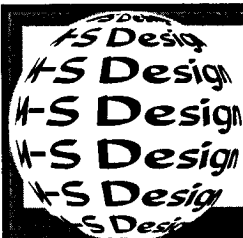
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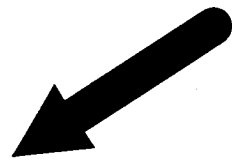
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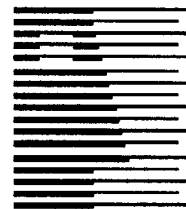
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STARTING BLOCK

by Richard Gunter

Informer II: Pics & Data



What Is a Database?

The well-known author, James Martin, once characterized a database as "a collection of data designed to be used by different programmers." He elaborated on this notion with a definition likely to confuse anyone but a specialist.

It suffices for most of us to think of a database as having two major components: a description of the data, and the data itself. Both parts can be reached through a generalized Data Base Management System (DBMS), which is a software package allowing us to manipulate the database in a standard way. The advantage is that one doesn't necessarily have to hire (or be) a programmer in order to design a database and do useful things with it.

Data items supported by traditional DBMSs are basically pretty simple and familiar: text (character strings) and numeric data. Oh, there are lots of variations on the basic data types. Data may be declared as rational numbers, integers, encoded dates, hexadecimal numbers, fixed and varying length character strings, or even paragraphs of text such as this one. Still just characters and numbers, though.

Recently, a few products have appeared which are capable of handling expanded types of data objects, such as whole documents in word processor format, sound files, images, and even animation sequences.

Informer II from Soft-Aware, Unlimited, allows one of these extended data types: images, i.e., pictures.

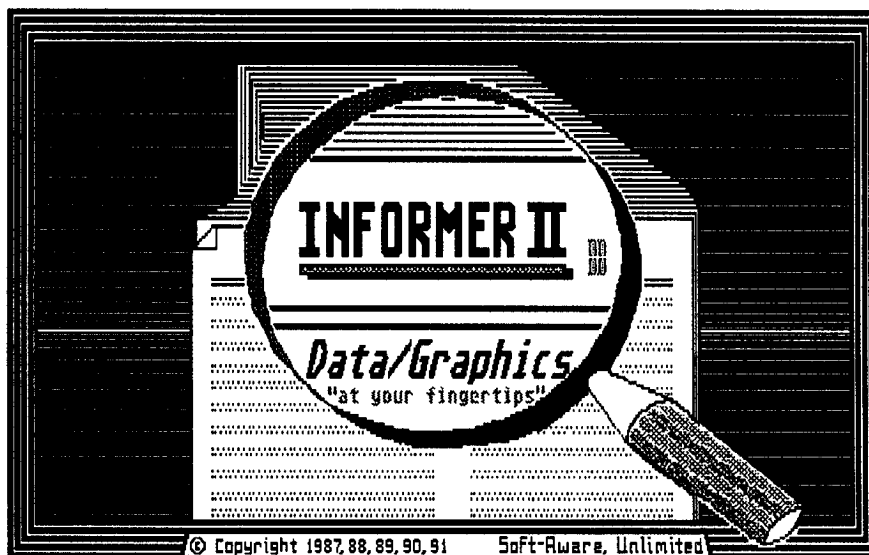
The General Stuff

Informer II is a GEM application said to run on any Atari ST or STe. I'm running it on my Mega 2/4 — a 4MB Mega 2 with TOS 1.4.

The manual says *Informer II* is a "multiple table, semi-relational, data-graphics manager capable of processing internal and external data records as well as manipulating presentation graphics."

Quite a mouthful.

As to the multiple table part, an *Informer II* database has a single name, and may include up to four independent "tables" of data. Each table consists of up to 56 "columns" (data items), which are declared by the user through menus and dialog boxes. There's no



requirement that one table have anything whatever to do with another; you could define one table for your telephone/mailling list and another could be your check register, if you like.

"Semi-relational" seems to mean that *Informer II* partially follows the "relational model" that has been hot in recent years.

When *Informer II* opens a database, it loads the entire contents into RAM. This imposes strict limits on the size of your databases, but makes its operation reasonably quick due to less I/O.

Obviously, the "internal" data are those data stored in an *Informer II* database; its ability to manipulate other data files consists of viewing text/image files not involved in the database. It is also capable of loading data from an ASCII file similar to the "export" or interchange format used by other programs, and of converting databases from a few other systems by means of a utility supplied with the package.

Overall Impressions

Informer II is not, in my view, a viable choice for professional use. RAM as working storage severely limits the size of the databases you can work with. It is worth considering for small personal database work, and it is an easy program to learn, in spite of a lack of polish in the manual.

A self-running demonstration is available, and there are tutorials supplied on the disks and discussed at length in the manual.

Serious users accustomed to working with relational DBMSs will find the "semi-relational" aspect of *Informer II* lacking. Data are defined in tables, but data in different tables can be manipulated in only one way that I've found so far.

A column in one table can be set through a table lookup method from another table. Thus, if one had a table of invoices, the customer name and address could be picked up from a mailing list table, requiring only that one update the mailing list to handle a change of address. As far as I've been able to discern, it is not possible to "join" two tables as it is in the relational systems.

Printer support is basic, and much like *Phasar* and *VIP Professional*—you specify printer control strings—there are no printer drivers as such.

It is exceptionally easy to define a database with the point-and-click methods of this program. Even more impressive is its ability to partially define a database from an imported ASCII file.

Searching and reporting are probably the main strengths of *Informer II*. Its dialog box method for specifying data selection criteria is good for all but the most complex conditions, and the sublist concept (a display that looks just like the main display, but contains only selected records) is quite handy. Records can be added or dropped from the sublist with a mouseclick, also a nice feature. Columns can be excluded from reports with equal ease. All this is easy and straightforward.

Image Handling

Informer II's ability to handle images is a major advertising feature and as such deserves separate discussion. I didn't like it much.

Any column of a table can be designated as a picture data type. What actually gets stored here is the filespec of the picture file itself. Unlike the rest of the database, images are loaded only at display time. Makes sense.

Unfortunately, the image processing capabilities of the program leave much to be desired. For one thing, the number of supported formats is quite limited. Only Degas, Degas Elite, and Neochrome are supported, and the compressed Degas Elite format takes significantly longer to load and display than its uncompressed counterpart.

You can only display pictures in the current resolution; in other words, if you're running in medium resolution, you can only display medium resolution pictures. Attempting to display a low resolution picture causes an abort. The sort of automatic conversion made commonplace by programs like *PICSW7*, *SUPER*

File	Do...	Display	Print
Open	.ADD a Column	.GO to the FORM	.REPORT (from LIST)
New	.DELETE a Column	.SET Column Attr.	.FORMS (from Format)
Save	.RENUMBER a Column	.SET Graphic Attr.	.WINDOW - Current
Save as... TEXT	.TOTAL a Column	.SET Screen Colors	.WINDOW - All Records
.Load Table	.VIEW a Column	.Control Functions	.SCREEN
.Save Table	.ERASE Table's Recs	.HIDE LIST Data	.STATUS Information
	.Shifted Functions	.SHOW the SUBLIST	.SET Print Options
Control/Setup	.MODIFY the SUBLIST	.HIDE Box Tops	
Status Info.	.SORT the LIST	.HIDE Markers	Sequences
Quit	.CALC all Columns	.STOP Box Movement	Set Col/Box Seq. For:
	.CALC 1 Column	.STOP all Formatting	.Calculating Records
	.CHANGE (Prev,Next)	.ALLOW AUTO-MATH	.Inputting Data
	.FIND {Prev,Next}	.1/2 Height on LIST	.Sorting Mult. Cols.
		.RECALC Curr. Record	.DISPLAY All Sequences

Informer II Menus

BOOT, and *DSLIDE* is not available. The display is also limited to the current screen color settings, which further limits the usefulness of *Informer II's* image handling.

Finally, the program seems to have no capability to print images. There's some confusion here, due to a slightly ambiguous use of the word "form" in the program. You can design a formatted display by arranging and sizing boxes corresponding to the data columns. This allows you to display an image along with the rest of the data in a record. This form is also used for data entry. In addition, you can design a form for printed reports, permitting you to print mailing labels and the like. The two sorts of forms are not the same thing.

ASCII Data Import

One feature that I liked was the creation of a database from an ASCII file. I've been using *VIP Professional* to maintain a list of the files available on the ARMUDIC BBS library. The data consist of a file number, name, size, upload date, number of times downloaded, and a short description. I capture this short form listing with my communications program, then edit it with *Word Perfect* and import it into *VIP*.

To initialize my *Informer II* database, I attempted to import this same ASCII file. After a couple of unsatisfactory attempts, I discovered that *Informer II* is more choosy about the import format than *VIP*. After cleaning up my input, I ran *Informer II*, and told it to load a table. It automatically created a table with the correct number of columns and loaded the data. Next I edited the column attributes to set string lengths, column names for the display and the like. Finally, I edited the data entry/display form by dragging and expanding boxes.

Finished! The whole operation, except for some tedium in setting up the input file, was a breeze.

Next time, we'll go into some of *Informer II's* features in more detail, and address the glitches I encountered.

[Illustrations accompanying this article were taken from the *Informer II* program disks.]



Fun with Stereo Sound on the TT030 & STE

by David Troy (C) 1991

You may guess from the title that I have a TT030. Much joy--it is true. My impressions of the machine are favorable. I can't tell you every program it won't run, nor every program it speeds up, simply because I use few programs. I will tell you my adventures with this 68030 monster, and then we'll talk about something fun: the much touted 8-bit stereo sound on the STE and TT.

I received my TT030 in late May. The machine was a 2MB machine, with a 50MB hard disk. I had ordered an 8MB machine with an 80MB hard disk. It had no keyboard. And the extra RAM was included, it just wasn't installed. This was all OK. I figured I'd just use my Mega STE keyboard, install the RAM, and accept the fact that Atari wasn't going to use 80MB hard drives, only fifties.

Before bothering to install the other RAM goodies, I thought I'd plug it in to make sure it worked. I plugged it into an Acer 7015 multisync monitor (hey, Jerry Pournelle, it works!), snapped the Mega STE keyboard in and turned it on. It worked as expected. I took the TT apart and admired the swell chips inside. I found the place where the fast-RAM daughterboard plugs in. It has four 1MB simms installed in it. That went in fine. Then I located the ports where the 2MB of ST RAM installs. I plugged in that board. I screwed everything back together and tested it once more. Things looked promising, and then the screen went nuts.

After much flailing around, I determined that the problem was

the 2MB ST RAM board. So I am currently in the process of getting it exchanged. But Atari doesn't have any right now. So I wait, and in the meantime, I have a 6MB TT030, with 2MB of ST RAM and 4MB of TT fast-RAM on that daughterboard. So, you're thinking, "Gee whiz, 6MB ought to be enough for even a psycho like Dave!" But there is a caveat.

There are two popular philosophies about computer design these days. The first, that which the ST was based around, says, "If we have a 68000 that runs at 8MHz then we can have everything on our address bus be based around 8MHz." This is handy. It means that you can use a single hunk of RAM for the processor, Direct Memory Access (DMA), DMA sound, and video RAM. DMA is cool. It makes for fast laser printing and hard disk access. Having the whole machine pinned to 8MHz also means that when you install an accelerator in your ST or use a 16MHz Mega STE, you're only speeding up the processor's internal operations, and whenever something on the address bus (any other chip, RAM, etc.) must be reached, a giant switch is flipped, bringing the CPU back down to 8MHz.

The second philosophy is to have a really fast CPU, like a 50MHz 68030 and give it some of its own RAM to play with. You cut out stuff like DMA and DMA sound, and just leave a little bit of video dedicated RAM. This is what the high end Macs do, and it's cool. Since the Mac never had DMA, nobody's missing it there, and it runs

super fast! (They don't have DMA laser printing, though!) The 68030 can use its own internal memory management unit (MMU--See Dave Small's Column, June '91) and talk to its ram in 68030 burst mode--allowing 32 bit RAM access! That is cool--very cool, and it's yet another reason why the TT can be faster than the ST. Not only does it execute instructions four times faster, but it can grab at twice as much RAM per instruction!

So which philosophy did Atari use for the TT030? Exactly both. The TT has one hunk of RAM it can use for the processor, DMA, DMA sound, and video RAM. That's the ST RAM. It's the SLOW RAM. In the Mac IIfx, where DMA is not an issue, you can just have a little video RAM and use 030 fast-RAM for everything else. But Atari had to provide compatibility with all their DMA stuff. That means you have to keep some ST RAM, and a fair amount of it, too. Want to provide compatibility with existing ST software? Might as well allow for 4MB of slow ST RAM. But what about the 68030? It can do all that funky 32-bit addressing. It needs some RAM, too. That's the fast-RAM. And it will only work with programs that don't need to do DMA, don't need to do DMA sound, and don't try to mess with video RAM directly. Many programs do these things, and because of that, my 6MB isn't really 6MB.

To set which programs should use the fast-RAM and which programs use the standard ST RAM, Atari made a program called PRGFLAGS, which allows the user

to set bits in program headers which tell TOS what type of memory to use. There are three user-selectable bits: fastload, run-in-TT-RAM, and use-TT-RAM. The fastload bit determines whether RAM should be cleared when a program loads. Clearing RAM takes time, so enabling the fastload bit prevents that clearing process. The run-in-TT-RAM bit determines whether a program is loaded into and executed from the fast-RAM. Most programs can run in TT RAM unless they break too many rules.

Running a program in TT RAM may not save you too much ST-RAM, though. Consider that your average program is about 300-400K in size. What takes up most of your memory is the RAM your program allocates after it loads. That's where the use-TT-RAM bit comes into play. If it's set, any requests for memory will cause TT RAM to be issued. This is great, provided that you're not trying to do any DMA stuff with that RAM. Enter *Calamus*.

Calamus, the DTP program we all know and love, does swell things on a TT with an SLM605 (or 804). Using it for the first time on a TT030 without any PRGFLAGS set, we discover, just as we discovered when using it on a Mega ST2, that 2MB of RAM isn't very much for *Calamus*. It's hard to use any decent fonts or have any graphics (and still be able to print it) when you've only got 2MB. To alleviate this, I turned on the fastload bit (for kicks) and the run-in-TT-RAM bit. This freed up about 300K of ST RAM, which left more room for our resident documents and DMA printer driver RAM. But still, it was a far cry from the 4MB machine I had been accustomed to.

So here I am, with a 6MB machine that is outperformed by a 4MB machine. For jollies, I turned on the use TT-RAM bit. It worked, and it had lots of RAM. I went to print. I got garbage. Yup, *Calamus* was using TT RAM, but it was

printing a snapshot of the place in ST RAM where my page *should* have been. So I got garbage. So, is there a moral to this story? No. Just don't assume that more RAM is more RAM.

Calamus and the TT

Calamus has a few bugs on the TT. It crashes if you try to do anything that involves clicking on numbers to change values. For instance, suppose that I have some text I want in 55 points. Normally you'd click on the point size value, backspace over the old one, and then change it. (Since 55 points is not one of the 12 or so default values.) But *Calamus* crashes when you try this on the TT. Same thing happens when you try to change line spacing. But everything else works. I called Nathan at ISD and he said that *Calamus S* and *SL* will fix any TT compatibility problems and these programs should be out sometime this summer. Not only would *S* and *SL* work on the TT, but they would be rewritten and recompiled to take advantage of the 68030 and the built-in 68882 math coprocessor. (*Calamus* and *DynaCadd* supported the optional Mega SFP004 68881 chip, but the 68881 in the Mega STE and the 68882 in the TT030 are at a different address.) So anyway, *Calamus* will be much happier very soon.

PageStream and the TT

PageStream works better on the TT at this point. While it doesn't run in the TT medium resolution, (neither does *Calamus*), it works well in the ST high rez mode. It also seems to be able to differentiate between ST RAM and TT RAM better. It can run from TT RAM and use TT RAM for documents and fonts, too. It just uses ST RAM for doing DMA laser printing. All in all, *PageStream* runs pretty fast on the TT. I mentioned last month that I was hoping to review *Pagestream* version 2.1. Now, I'm hoping even more. I am still trying to get a copy for review

and, when I do, I'm guessing it will really fly on the TT.

Ultrascript and the TT

It seems that one way or another, every time I get a new machine, *Ultrascript* needs a song and a dance to run. I've mentioned I couldn't get version 2.1 to run on my Mega STE with the Extensible Control Panel installed. With the TT, the problems get deeper.

There are two problems. The SLM804/605 version has a typo in the address for the DMA port. This doesn't cause a problem on the ST, because it truncates the high end of addresses. But on the TT, that part of the address is valid and it points far off into never never land. *Ultrascript* also uses some self-modifying code which will not function correctly with the TT's processor cache activated.

So, Mike Fulton at Atari, who used to be with Neoept (*WordUp*), made a loader for *Ultrascript* on the TT. It does two things. First, it saves the current state of the cache, disables it, then finds the DMA typo in *Ultrascript*, fixes it, runs *Ultrascript*, then when done, restores the cache to its original state. I had a heck of a time getting it to work until recently, when I got a new version from Mike. It works on version 1.1 only, though, and Mike and I still don't know why it won't work on my machine with version 2.1. But that's ok. What is disappointing is that the program won't work with the TT's cache on, which is where much of your speed increase comes from. I wished that Imagen would re-do *Ultrascript* for the TT and take advantage of the 68030, its cache, and the 68882. But Imagen was purchased by QMS who set up an office in Alabama, letting go of most of the key people who wrote the program. I asked Mike if *Ultrascript* was really dead, and he said that there was still hope with Imagen. What that means, I don't know, but perhaps we will see *Ultrascript-030* sometime soon, or at least a comparable product.

Laser C and the TT

The *Laser C Shell* doesn't run on the TT. Megamax says that they will not be upgrading for the TT and that, "Turbo C has the market all sewn up in Europe, which is where the money is." So, that's that. But, while the shell doesn't run, the compiler and linker work just fine when run from a command line interpreter or other environment manager. And I have had a chance to write my first few programs in Laser C on the TT.

New Sounds on the Atari

When I got the Mega STE, I was curious how one went about programming the serial LAN (Appletalk compatible) port. Well, I couldn't try anything with it until I had another machine that had that port, and that was the TT. So I wrote a little program and was nearly successful in bopping bits back and forth on the LAN port. But for some reason or another, it wouldn't quite work. When I lost interest in that, I fell back on another project that I had started almost a year ago: playing ST Replay sounds through the STE/TT030 DMA sound hardware.

The 8-Bit Pulse Code Modulated Stereo Digitized Sound was a feature of the 1040STE that many people are still wondering about. Does anyone use it? How does it work? Is my keyclick stereo? Well, if you read the manuals on how it works, it's quite simple. Essentially, all you have to do is get yourself a hunk of RAM (ST RAM), tell the computer where it is, and then tell it to start playing.

The program accompanying this article allows you to take one or two ST Replay format sound files and play them back in mono or stereo, respectively. The hardest problem to overcome here is that ST Replay saves files in an unsigned eight-bit format. What this means is that when the sound chip sees a 0, it will cause full negative displacement of the speaker, and when it sees a 255, it will cause full

```
/* ST Replay format digitized sound player for TT/STE Hardware.
(C) 1991 David C. Troy - May not be reproduced without sympathetic thoughts. */

#include "portab.h" /* Standard Atari Headers. Should be OK with */
#include "osbind.h" /* Laser, Alcyon, Mark Williams, etc. */

/* Macros to allow easy write/read to memory locations. Not a trivial thought. Trans-
lates to: THE 16-bit (UWORD) CONTENTS of the MEMORY LOCATION 0xwhatever
POINTED TO by the number 0xwhatever. */

#define DMASCTRL (*(UWORD *)0xff8900)
#define FRMBASEH (*(UWORD *)0xff8902)
#define FRMBASEM (*(UWORD *)0xff8904)
#define FRMBASEL (*(UWORD *)0xff8906)
#define FRMENDH (*(UWORD *)0xff890e)
#define FRMENDM (*(UWORD *)0xff8910)
#define FRMENDL (*(UWORD *)0xff8912)
#define SNDMODE (*(UWORD *)0xff8920)

/* I'm using some global variables. This is bad practice, but it makes writing a little
goofy program like this easier.

save-ssp = user stack for supervisor mode routines
frame = start address of left/combined data frame
rframe = start address of right sound channel data frame
rsize = size of right sound channel file
ramsize = amount of RAM required for our left/combined data frame
ch-size = minimum of either lsize or rsize, just = to lsize if mono
Mono = boolean to tell whether we're in mono or not
fp = 16-bit Gemdos esoteric file pointer */

LONG save-ssp, frame, rframe, rsize, ramsize, ch-size;
BOOLEAN Mono;
WORD fp;

sup-on() /* Turn on Supervisor Mode */
{
    save-ssp = Super(0L);
}

sup-off() /* Turn off Supervisor Mode */
{
    Super(save-ssp);
}

Sign() /* Converts from Replay unsigned to Atari signed format */
{
    LONG c=0;

    while (c++<ramsize)
    {
        if (*(unsigned char *) (frame+c) < 0x80)
            *(unsigned char *) (frame+c) += 0x80;
        else
            *(unsigned char *) (frame+c) -= 0x80;
    }
}

Stereo() /* Takes left and right data and combines into Stereo data. */
{
    LONG c=ch-size, c2=0;
    while (c-- >= 0)
    {
        ((UBYTE *) frame)[ramsize - c2++] = ((UBYTE *) frame)[c];
        ((UBYTE *) frame)[ramsize - c2++] = ((UBYTE *) rframe)[c];
    }
}

main()
{
    /* More variables.
```


positive displacement. The intermediate 128 has the effect of not moving the speaker at all. This is cool.

The STE/TT hardware expects that the sound data be presented a little differently. Rather than having the unsigned data, with 0-255 as the range, the chip wants signed data, with a range of -127 to +128. Full negative displacement is -127 and full positive displacement is 128. Zero is now the intermediate value, and it has the same effect 128 has in ST Replay format, of not moving the speaker at all. So, we can see that we need to create a function that maps from the unsigned data to the signed data.

Atari's choice of mapping their signed values makes our function writing fairly easy. To the sound hardware, 0 through 127 really are 0 through 127, but 128 through 255 are really -128 through -1. So to go from ST Replay format to STE/TT format, we need to map the values 0-127 to 128-255, and map the values 128-255 to 0-127. This means, in effect, that all we have to do is take our data and reflect it around 127. If a value is greater than 127, subtract 128 from it. If it's less than 127, add 128 to it. This does all of our remapping.

When the sound hardware is in mono mode, it fetches one eight-bit byte at a time and plays it at the the sample speed through both the left and right sound ports. When the sound hardware is in stereo mode, it fetches a 16-bit word at a time, each word containing two bytes: the values for the right and left sound channel, the left channel being in the right half and the right channel in the left. (It makes sense if you think binary.)

If we read in two ST Replay format sound files to be played in stereo, we have to pair up each byte, one-to-one, left-to-right in memory before we can play them in stereo. That, too is a fairly simple and quick procedure. That is, provided you've got enough RAM to have two buffers--one to hold the combined stereo data and one

```
lfname = Left Channel Filename
rfname = Right Channel Filename
S-or-M = Stereo Or Mono? character variable
speed = Speed we're playing sample at. Range 0-3.
err = Error flag to check validity of Fsfirst
olddta = Your machine's default dta address. We're saving it
        in olddta and then changing it to newdta for our use.
newdta = Our new dta address. Allows us easy access to file info.
ok = Boolean to determine if Mallocs were successful */
```

```
char lfname[40],rfname[40],S-or-M,speed=1;
int err;
long olddta = Fgetdta();
struct {
    char crud[25];
    long fsize;
    char fname[14];
} newdta;

BOOLEAN ok;

Fsetdta(&newdta); /* Set dta address to our own newdta */

printf("[S]tereo or [M]ono Sample?\n");
scanf("%c",&S-or-M); /* Is this Stereo or Mono */
if (toupper(S-or-M) == 'M')
    Mono = TRUE;
else
    Mono = FALSE;
err = 1;
while (err) /* Keep on getting lfname until correct. */
{
    printf("Left Channel Sample Filename: ");
    scanf("%s",lfname);
    err = Fsfirst(lfname,0);
}

/* The RAM we need is the size of the left channel sample file.
   ch-size = the smaller of the left or right channel.
   At this point, it's the left channel */

ramsize = ch-size = newdta.fsize;
printf("%s is %ld Bytes\n",lfname,ch-size);
if (!Mono) /* If NOT Mono, it must be stereo. */
{
    err=1; /* Keep on getting rfname until correct. */
}
```

Table W -- Common Addresses and their Origins

Hex Address	Name	Value
ff8900	Sound DMA Control	0 = Sound is OFF 1 = Play once 3 = Repeat forever
ff8902	Start Address (high)	leftmost 8 of 24 address bits
ff8904	Start Address (middle)	middle 8 of 24 address bits
ff8906	Start Address (low)	right 8 of 24 address bits
ff890e	End Address (high)	leftmost 8 of 24 address bits
ff8910	End Address (middle)	middle 8 of 24 address bits
ff8912	End Address (low)	right 8 of 24 address bits
ff8920	Sound Mode Control	Bits m000 00rr WHERE: if m=0 Stereo, m=1 Mono rr decimal Sample Rate 00 0 6.258 KHz 01 1 12.517 KHz 10 2 25.033 KHz 11 3 50.066 KHz

to hold the right channel by itself. If you try to combine the two using a single buffer that is just long enough to hold the combined stereo data, you end up doing a very long and tedious combination algorithm. (If anyone knows a quick way to do this, let me know.) The other way to do this is to read in the data from the disk files one byte at a time, but that too is slow, at least in C. Again, I do not claim to be "Master Programmer, Chief of the C Tribe," so if anyone has any better ideas on how to do what I've done, let me know. I'm trying to learn, too.

Just going through the program quickly, you'll notice the macros I set up to allow access to the DMA sound chip registers. They allow easy "poking" and "peeking" to those registers and are quite helpful.

The sup-on() and sup-off() routines deal with the 68xxx supervisory programming mode. Essentially, supervisor mode allows us to tweak the sound registers which live in a protected part of memory. So we turn on supervisor mode to get access to the sound registers and turn it off when we're done.

The Sign() and Stereo() routine perform the functions we already talked about; they convert to STE/TT format and then do the Stereo pairing up if necessary.

The main program is easy to follow, even if poorly structured. We start by setting up a data structure called "newdta," along with some other variables. The dta is a 44 byte structure that gets filled with information about a file (like its size, its creation date, filename, etc.) when you execute a Gemdos function called Ffirst(). We use that to make sure we have enough memory to load your sample files without actually loading them. So we just tell Gemdos that we want to remember where the dta used to be, with the line olddta = Fgetdta(). Then we tell it to use our newdta by saying Fsetdta(newdta). From there, we find out whether to do

```
while(err)
{
    printf("Right Channel Sample Filename: ");
    scanf("%s",rfname);
    err = Ffirst(rfname,0);
}
/* The right channel size is the size of its file. */
rsize = newdta.fsize;
printf("%s is %ld Bytes\n",rfname,rsize);
if (rsize<ch-size) /* If rsize is less than ch-size is now, */
    ch-size = rsize; /* then ch-size = rsize. */
/* So, twice as much RAM as the smallest sound channel. */
ramsize = ch-size * 2;
}
/* Unless both of these Mallocs are OK, we won't execute the program. */
ok = FALSE;
ok = (frame = (long)Malloc(ramsize))>0;
if (!Mono)
    ok &= (rframe = (long)Malloc(ch-size))>0;
if (ok)
{
    /* Read in left sample file into the left/combined data frame */
    fp = Fopen(lfname,0);
    Fread(fp,ch-size,frame);
    Fclose(fp);
    if (!Mono) /* Then it must be stereo. -> */
    {
        /* So read in the right sample file into the right frame */
        fp = Fopen(rfname,0);
        Fread(fp,ch-size,rframe);
        Fclose(fp);
        Stereo(); /* Copy from rframe to frame (combined) */
    }
    Sign(); /* Do the ST Replay ---> STE/TT Conversion */
    /* DO THE SOUND!! */
    sup-on();
    FRMBASEH = frame>>16; /* Tell it start address */
    FRMBASEM = frame>>8;
    FRMBASEL = frame;
    FRMENDH = (frame+ramsize)>>16; /* Tell it end address */
    FRMENDM = (frame+ramsize)>>8;
    FRMENDL = (frame+ramsize);
    DMASCTRL = 3; /* Repeats Forever */
    sup-off();
    Fsetdta(olddta); /* Resets dta to olddta value */
    while (speed<4) /* Allows user selectable speed - just fun! */
    {
        sup-on();
        SNDMODE = (char)Mono << 7 | speed;
        sup-off();
        printf("\n\n0. 6.258 KHz\n");
        printf("1. 12.517 KHz\n");
        printf("2. 25.033 KHz\n");
        printf("3. 50.066 KHz\n");
        printf("4. Blow this popsicle stand - leave noise running\n");
        printf("5. Blow this popsicle stand - AH! Save Me!\n-->");
        speed = Cconin()-48;
    }
    if (speed==5) /* Turn off sound before we leave. */
    {
        sup-on();
        DMASCTRL = 0;
        sup-off();
    }
    Mfree(frame); /* Frees up combined frame */
    Mfree(rframe); /* Frees up right frame */
    printf("\nSee ya!\n");
}
else
    printf("Silly rabbit, trix are for kids! You don't have enough RAM!\n");
}
```

stereo or mono, what the filenames are, and what size they are.

If we're doing mono, we only need as much ram as the left channel file, but if we're doing stereo, we need twice as much ram as the smallest of the left and right channels. If that ram is available, then we read in the left channel and the right channel if it's stereo. If it's stereo, we do the Stereo() function and pair up the little buggerbytes. We convert from the ST Replay format to the STE/TT format with the Sign() function, turn on supervisor mode, set the sound registers and then sound's a playin'. I put a little loop in there to let you change the speed it plays at. That's fun. Then, when you're done, you can leave the sound playing. That's kind of cool - you have sound playing while you work. Since I didn't allocate that RAM for my program, though, that RAM can and will be used by other programs which means that your sound will be replaced by the wonderful sound of *WordPerfect*, or whatever program you're using. That often sounds like a dying hyena, or machine gun fire, or a bad joke. To disable that, either reset your machine or run my program again, this time exiting with the "AH! Save Me!" option.

I should mention that this program is set up to loop through your sound forever and ever, all without detriment to other computer functions. This is a feature of the DMA sound hardware and it seemed like a good idea to use it, so you could really get to know your sound file. What I did to test this program was use ST Replay and digitized a nine second wailing vocal from the song "Belong" on R.E.M.'s latest release *Out of Time*. It lends itself to repetition because they repeat it in the song. I digitized the left channel and then digitized the right channel, and tweaked them both until they looped perfectly. Running them through my program, I find I didn't get them exactly in sync, but I'm awful close and it gives a kind

of "stadium" effect. Yes, you can tell it's stereo.

If you don't have ST Replay, there are a ton of sound files that are compatible. Just get a couple and play them back at the same time, in stereo! You can find them on GENie or in public domain libraries. You may note that ST Replay does not digitize at any of the STE/TT sample rates mentioned in Table W. So, you will get some speedup or slowdown no matter what you do. To change the frequency of an ST Replay file would require some serious killer Calculus--a Fast Fourier Transform. I'm working on it. I'll get back to you. Other more complex techniques, like working with interrupts, are needed to string together different pieces of songs in various combinations. I just thought y'all might like to make some use of your DMA sound. If this stuff interests you, become an Atari developer. Call Gail Johnson at Atari--her number is 408-745-2022.

The information in the table probably belongs to Atari Corp. somehow or another.

To use this program you'll need a C compiler. I'd love to hear which ones worked for this program. I had no trouble using *Laser C* (from a CLI) on the TT, and a compiled version of this program ran just fine on the TT, the 1040STE and Mega STE. DO NOT attempt to run this program on a non-STE. It will probably crash your machine.

I suppose that's all I have room to say. If anyone has any questions or comments on my programming technique or algorithms, or has a good way to do a fast Fourier transform, let me know. And if anyone would like to try my program on their STE, but don't have a C compiler, I will post an ARC with everything in it on GENie. And if you don't have a modem, send me \$5 and I'll send you a disk. If you have any questions about the TT, get a hold of me in one of the usual ways. You won't read me again un-

til September, so I'll tell you now I'm off to vacation in the Caribbean. And I also plan on attending the Dusseldorf computer faire this August. But you won't hear about that until October. (grin). And in the meantime, I'm gonna have fun with my 030.

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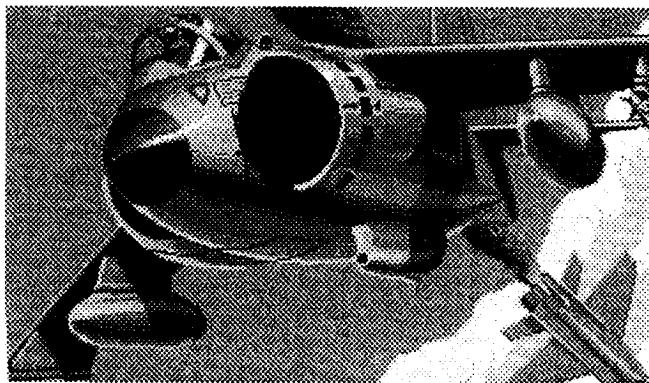
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PILOT

Ins and Outs of Combat Fighting, Part 2

By Milton Laughland Jr.



Come Fly with Me

It's a cool February afternoon in Kuwait, as Major Van Pool (VP) climbs aboard his *Falcon*. AIM-9L missiles hang from the wings. Today's mission: patrol the Kuwait/Iraq border. VP takes off, climbing to 8K ft. towards the northwest corner of friendly territory. Meanwhile, home base keeps an eye on the skies.

Suddenly, ground control spots a MIG coming up from the South and radio's VP, "Tower to VP, bandit low on your six!"

VP replies, "Roger, Tower. Turning left and low ... Let's rock and roll!"

After maneuvering to 180 degrees, VP's center radar screen shows the MIG's distance at 25 ... 24 ... 23 closing fast, altitude at 3K and climbing, 360 heading, speed at 450 knots, and the aspect angle at 12 o'clock.

The MIG and VP race towards one another at a combined speed of 900 knots. VP arms an AIM-9L and begins descending towards the MIG. At 12 miles, the HUD's target designator appears followed shortly by a blinking diamond on the HUD signaling that the AIM-9L missile has locked onto a heat source. At six miles, VP fires his missile and then immediately switches armament to his cannon.

Seconds pass like minutes waiting for the MIG to explode. As the missile approaches, the MIG dumps flares to confuse and avert the missile. As luck would have it, the MIG avoids the missile. Suddenly, here comes the MIG! VP can

almost see the pilot's smirking face. VP fires one short cannon burst down the MIG's throat, rolls to the right, and looks behind. A puffy black cloud trails behind the downward spiraling MIG. Scratch one MIG off Iraq's flight roster.

Is it real or is it Memorex? It's *Falcon*, the premier of combat flight simulators.

In lesson one of PILOT, we covered basic flight procedures. You should have been practicing diving and low level ground attacks. Keep practicing. Today, we'll cover air-to-air and begin air-to-ground combat techniques. Remember, numbers or symbols (#) refer to the number keypad. Numbers or symbols above or below the lettered keys are shown with the prefix (T).

Locating the Enemy

Several methods are available to locate the enemy depending on your location. In the above scenario from Mission Disk 1 (MD1), Grand Slam, the earliest warning comes from your ground observer (T8) in the control tower. I use this technique in MD1 and MD2 when looking to battle MIGs and I'm within visual range of the control tower. Once at operational altitude, go to tower view (T8). A MIG will appear as a white dot revealing his approximate location and altitude.

The next visual detection trick is the tracking view (T9/T2) to scan clockwise around your *Falcon*. In MD3, you can also scan counterclockwise (T1). Effectiveness decreases as your altitude increases.

The cockpit views (1, 3, 7, and 9) can also be used but are less effective because you cannot see below your *Falcon*.

After spotting the MIG visually, return to the cockpit. Either fly towards the MIG manually or use the autopilot (A) to fly towards its position. Now you begin using *Falcon's* sophisticated electronics.

Electronic Intelligence

The *Falcon's* forward looking radar detects aircraft up to 28 miles (40 miles in MD3) if the plane is within 90 degrees left or right of center. A MIG coming from your "six" (behind) is invisible to radar. However, you have your Threat Indicator screen which shows the position (not distance) of MIG(s) or missile(s) radar emissions to you. Use this screen when the MIG is out of visual or radar contact. Be careful because experienced MIG pilots become invisible by turning off their radar as they approach.

OK, you've spotted the MIG and have turned in his direction. *Falcon's* electronics now provide important information to determine whether you are head-to-head or at his "six," require cannon or missiles, or need to maneuver into better position.

The center radar default setting is for the "Boresight" Scan radar. The number in the upper left corner shows the MIG's distance from you. If the number decreases rapidly, the MIG is heading for you. The upper right hand corner has the MIG's altitude. If the MIG is at 10K and you're at 6K, you need to

start climbing NOW. If the MIG is at 6K and you're at 10K, start descending to him.

The lower right of the screen has four numbers. The first number gives the MIG's compass direction indicating whether he's coming at you or you're on his "six." For example, if you're both on a 180 heading, you're both flying in the same direction. If the MIG's heading is 200 and you're at 20, you're head-to-head or close to it.

The second number indicates the MIG's speed and is not important when head-to-head. When approaching the MIG's "six" and his speed is equal to or faster than yours, break pursuit and wait for the next MIG. The MIG's aspect angle and closure rate are for the advanced pilot. Review your manual on these items.

The HUD

The head-up-display (HUD) provides active combat data. Read manual pages 62-64 concerning the HUD. As the MIG approaches, the aspect angle indicator appears outside the center circle showing the direction of the MIG at 13 miles. When the MIG is at 12 miles, the target designator (a square box) will appear where the MIG can be seen in the HUD. A flashing diamond symbol appears when the MIG is at 8 miles. Wait until the MIG is at 5 or 6 miles to fire your missile and then immediately switch to your cannon.

Major VP demonstrated the value of switching to the cannon after launching a missile. By the time you determine that your missile missed, it's too late to fire another missile (except in MD3, see below.) Once you fire your missile, it's locked on target and you should switch to your cannon.

Armament

The *Falcon* manual states that the Vulcan Cannon carries 5000 rounds. The on-board weapons display shows 500 so I presume it's 500. Holding the trigger 5 seconds

fires all 500 rounds and is one of the two biggest mistakes of a new pilot. Experienced pilots tap the trigger once releasing 14 rounds for a total of 35 available short bursts. Short bursts provides for sustained combat. Fire only when you're close to your target (the proverbial "only when you see the whites of their eyes.")

Firing at or even near the MIG will usually score a hit. A word of warning when flying in MD3; you can't fly through an exploding MIG without damaging yourself, so roll out of the way FAST!

You have several choices of missiles. Read the *Falcon* manual for missile details. What you need to know is when to use them. In MD1 and MD2, fire the AIM-9J from behind the MIG, and use the AIM-9L for head-to-head. In MD3, use the AMRAAM-120A for head-to-head and save the AIM-9M for attacking the MIG's "six."

The second big mistake of new pilots is firing too many missiles. If the first missile fails to hit, chances are the rest will too (except in MD3). Also, by the time you fire a second missile after seeing the first one miss, the MIG will be chopping you to pieces with his cannon. There is an exception to this rule. In MD3, the AMRAAM-120A with advance radar allows firing when the MIG is 18 miles out. After firing your first 120A, pause 3 or 4 seconds and then fire a second missile. The MIG will activate his defenses for the approaching missile. If he avoids the first missile, the MIG usually discontinues his countermeasures. By the time he realizes a second missile has arrived, it's too late, and boom, down he goes.

In MD3, if you fire at a MIG at 18 miles and miss him, you may have time to target again and fire a second missile.

Rear-assault

When approaching the MIG from the rear on a straight course, use the AIM-9J missile or fire a

short burst up his exhaust when you're close to the MIG.

The most difficult shot is when both of you are banking hard. Don't waste missiles or cannon fire. Wait for the MIG to start turning left and right. Anticipate his next turn and fire your missile when he begins changing direction.

If you can't catch up, try this trick. Switch to your cannon and then change to a straight course. View the MIG from your side and rear view mode (7 or 9, 3) as he maneuvers to get behind you. When the MIG begins coming at your "six," pull back hard on the stick (2) for a vertical loop. When you're half way over your loop; roll over to level flight. The MIG will usually follow you up to the higher altitude and by the time he realizes the switch, you should be head-to-head with the MIG. Fire your cannon as he approaches. However, if you use this maneuver several times in one mission, the MIGs wise-up and either dive or climb out of the way.

Air-to-Tank and Boat

Air-to-ground combat requires the skill of flying and aiming simultaneously. Gravity and speed are your real enemies. Dive too fast and too steep, and you'll be heading for a "sand"wich on the desert floor.

In MD2, you must continually knock out newly arrived tanks and landing craft. Once you master destroying these two elements within one mission, you can concentrate on the more difficult targets.

Let's begin with MD2's mission Rolling Thunder. Have your crew chief load 2 AIM-9L missiles, and all the AGM-65B Maverick missiles you can carry (hopefully all 6 but never less than 3).

Take off as instructed in lesson one, except cut your afterburner at 200 knots and level off at 2K. Turn northwest on a heading of 45. Use the tracking view (T9, T2) to spot the middle tank by the small sparkle coming from its cannon

discharge. Once you've spotted the tank, return to the cockpit and activate your Maverick missile system. Using the HUD, fly towards the tank. Lock the missile on the tank when you can see the tank. Make sure the target box is on, or just below, center of the tank. If you aim too high, the tank's forward motion will cause the missile to hit behind it.

After you fire the missile, pull up to 2K and make a sharp right turn toward the second tank. You need to fly at a slow, following angle that keeps you heading for the front of the moving tank because you're approaching from the side. Again, when close, lock on and fire. Pull up, bank again hard right, and head for the third tank.

Make sure you don't drop below 500 feet. Your angle of attack should be constant but slow. Also, if you come in too fast and your lock on the tank is off, break off the missile lock (TX), pull up, and go after the next tank.

I find the most efficient method of attack is to hit the middle tank, swing clockwise to neutralize the right tank, and finish by hitting the left tank. This places you in the best position to take out the closest landing craft. Though the landing craft are another mission, you need to hit them now so you can then attack targets behind enemy lines in your next mission.

After destroying the left boat, swing right and go after the far right landing craft. Destroy the middle boat last since it's furthest from shore. Use the same Maverick missile tactics on the boats.

If you run out of missiles, use your cannon. This requires lower speed with flaps (F) and airbrakes (B). Pay strict attention to air speed and don't drop below 200 knots. Come at the boat from a lower altitude and a shallow angle of attack. Remember, it only takes a few bursts of cannon fire. When you see the boat flip over, pull up hard and disengage the air brake and flaps.

It takes practice but you must master taking out the tank and landing craft before moving to other missions. If you have the fuel and some Sidewinder missiles, hang around and take out some MIGs for extra points after destroying the tanks and boats.

Air-to-Truck and Train

To slow up the tank invasion, you must destroy the trucks and train. Rather than waste time on hitting the trucks, go onto the Serpent's Jaw mission and take out the Wilson Bridge. This will stall commuter traffic but they won't notice the difference. One Maverick missile can accomplish this by flying 500 ft. straight up the highway to the bridge, lock on, and fire. Then turn sharp and be prepared to release chaff and flares to avoid the shoulder SAM missiles.

Presuming you're successful at destroying the bridge, don't end your mission here. Head southeast towards the railroad line. Hunt down the train and hit the lead car. If successful, the rest of the cars stop and become sitting ducks. You can use your cannon but it's difficult.

Of course, during this time, there are MIGs flying north. As tempting as it is, avoid them until after you've delivered all your ground packages. Dog fighting with a load of Maverick missiles may slow your style, or worse, result in a stall.

SAM Missiles

A few words about SAMs. Though flying at the rank of Major allows for unlimited chaff and flares, the SA-2 and SA-6 will still cause considerable distraction when you're diving at ground targets. With most ground targets, stay below 5K to avoid these types of SAMs. When fighting MIGs, the SAMs are not launched because they cannot distinguish between a MIG and a *Falcon*. After killing the MIG, the SAMs will be fired

within seconds, so dive below 5K if you're not already down there.

The SA-7, shoulder fired SAM, has a ceiling of 5K and is usually located around specific targets. Use flares and wiggle in different directions (Not you!...the plane!) to avoid being hit.

The ALQ-131 jamming pod (MD1 & 2) and the spare fuel tank can help when hitting heavily fortified targets far inside enemy territory. Unfortunately, they're heavy and a negative factor when fighting that MIG that always appears when you're fully loaded deep into enemy territory. I only use the spare fuel tank when I'm hurrying to my target with full afterburners. Before arriving at my target, I dump the spare tank. But when you dump the fuel tank, you lose the ALQ-131, so why bother bringing it?

In my third and final briefing, I'll explain how to successfully destroy difficult targets, such as the enemy airfield. I'll also discuss MD3's long range air-to-air techniques, and finish PILOT with landing instructions for the *Falcon* and *Flight Simulator II*.

Meanwhile, if you have any combat techniques for *Falcon* or any other flight simulator which you would like to share in future PILOT articles, drop me a line at 13734 Greenbriar Drive, Woodbridge, VA 22193.

One last comment. Last year, I watched a segment of the Computer Chronicles on flight simulator software. One of Spectrum HoloByte's founders demonstrated the *Falcon*. He roared down the runway with full afterburners blazing, pulled the stick back, climbed, stalled, and crashed. You'd think if anybody could fly *Falcon* it would be one of the designers. The distraction of explaining and flying *Falcon* in less than a minute before TV cameras clearly demonstrates the concentration, planning, and attention required to fly *Falcon*.

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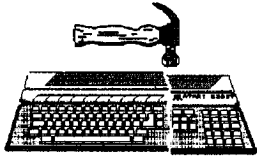
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by J. Andrzej Wrotniak

Data Typing 101!

Plus: two compilers from Goldleaf and the best book on sky computing

Two months ago we were talking about syntax and control structures in programming. If this is the first "State of Mind" installment you are reading, do not worry: each piece can be read (almost) as a separate, self-contained whole (but, by the way, where have you been all this time?).

Let me stress once again a major point: the language syntax and the choice of control structures (loops, jumps, ifs, etc.) are secondary features of a programming language. In this aspect, differences between most of the mainstream languages of today (BASIC, Pascal, FORTRAN, Modula-2, Ada, C, C++) are not important: a concept expressed in one language can be, in a great majority of cases, easily translated into another.

We must, however, remember that program instructions manipulate *data*. The data have to be somehow represented and organized in our program, and from this angle different programming languages may offer vastly different features. But let us start from more mundane aspects of data typing, where, again, all languages look very much the same.

Step One: Numbers and Text

The first use of computers was, easy to guess, *computing*, or number-crunching. Some guys in Los Alamos had nothing better to do and wanted to see how the neutrons propagate through a slab of uranium, knocking other neutrons out of nuclei, some of them being lost on the way and some not, heating the slab up--will the whole thing blow up or not?

Needless to say, the first high-level programming language, FORTRAN, initially dealt with very simple data objects: numbers. But even these can come in two quite distinct kinds.

The first kind are the numbers used to *count* things or occurrences: one potato, two potatoes (a better example: do it once, twice, etc). With the allowance for negative values, these numbers are represented as variables of *integer* type (or, as we will see, *types*).

The second kind are the numbers used to *measure* things or effects: 2.33 pounds of potatoes, or 3.175 milliseconds of time. Again, allowing for values less than zero, data objects to store these values are referred to as *real*.

This approach is used in all programming languages with one notable exception: BASIC (at least in

its original version). The authors of BASIC, professors at Dartmouth College, were afraid that their students may face a conceptual barrier trying to distinguish between reals and integers (what about exactly one pound of sugar, or two and a half apples?), and so BASIC has just *numbers*, some of which just happen to have round values. (This, I think, was a bad design decision, as the advantages of treating differently integers and reals are considerable, and people who cannot understand the difference should stay away from programming.)

The situation became more complicated when some languages (or dialects) introduced objects of different sizes. For example, the FORTRAN type REAL uses (in most implementations, at least) four bytes of memory (this gives about seven decimal digits of precision), while DOUBLE PRECISION uses eight bytes (16 digits or so). A similar situation exists in newer versions of C (types float and double), in some dialects of Pascal (Prospero: REAL and LONGREAL) and in other languages.

Integers also can have different lengths, so that they are capable of storing numbers in different ranges. Additionally, some languages introduce *unsigned* types (for example, types int and unsigned int in C, or INTEGER and CARDINAL in Modula-2). These are, again, secondary differences.

When programmers were able to deal with numbers, they then wanted to handle *text*. After all, they said in Los Alamos, it would be nice to have the final printout not like "1.0013" (which is a way to say: "an average neutron will produce 1.0013 new neutrons before dying, and soon we will have zillions of them"), but rather "Will blow up, run for it!". And yes, indeed, text (or character string) data objects were soon introduced in all programming languages.

Let me save you from the details, which are not very interesting. Suffice it to say, the early programming languages were capable of handling data objects of numeric or textual nature only, and everybody was quite happy. Even now, people doing scientific computing do not complain about the absence of more advanced data objects in FORTRAN.

Step Two: Arrays

The numeric data types are sometimes referred to as *simple* types. These can be used to form *composite* types. The most common composite types are *arrays*,

consisting of other objects, all using the same name in the program. For example, a Pascal statement

```
VAR x: ARRAY [1..100] OF REAL;
```

means: "reserve enough space for 100 objects, each of the REAL type, and allow for referring to these objects as x[1] ... x[100], treating each of them as a simple variable." Such an array may be useful, for example, in storing the energies of the 100 neutrons our program is dealing with.

Up to this point, the differences between languages are very insignificant, limited mostly to the syntax. For example, the same array declaration in C would look like this:

```
real x[100];
```

and in many dialects of BASIC:

```
DIM X(100)
```

Some small differences can, still, be quite annoying. For example, the elements of the C array declared above have to be accessed as x[0] ... x[99].

A more painful (and usually underestimated until it starts hurting us) peculiarity of C (and of its worthy successor, C++) is that C arrays are not treated as data objects, but as machine addresses or pointers, with quite far-reaching consequences. This may lead to lots of confusion on higher levels of programming.

Unfortunately, the detailed discussion of arrays in C is far beyond the scope of this article. Let me just say that one of the recognized authorities in the field, the author of C++ and one of the strongest players in the C camp, Dr. Bjarne Stroustrup, was himself very unhappy with the array concept in C++ (inherited from C to preserve compatibility), as "being beyond repair."

Anything to Declare?

If a program uses a data object, it must be aware of the object's existence. At some moment the program has to reserve a piece of memory to store the object value.

How does the program "know" about an object, say, a variable? The simplest approach was used, again, in FORTRAN. If the compiler scanning the program code found an identifier, i.e. a sequence of characters which was not a reserved word and which was used in a context proper for a variable, it would just add this name to the list of known variable names. The type of variable was determined by the first letter of its name: if it was between I and N, the variable was integer, otherwise--real. A similar approach has been used in BASIC, where the situation was additionally simplified by the lack of distinction between integers and reals.

This looked quite nice: the programmer did not have to type anything to announce a variable to the compiler. On the other hand, it could easily lead to painful (and hard to detect) programming errors. If, for example, the program computes the value of a variable ENERGY and somewhere else, attempting to

use this value, refers to it as ENEGRY (an obvious typo), the stupid compiler would just create two different variables. The computation result will be stored in EN-ERGY, while ENEGRY may be used for further computations--but nothing has been stored there, the variable may just contain some random combination of bits! If you are unlucky (and programmers usually are), the wrong value may cause visible trouble in a very different point in the program from where it was used.

Most languages require that you *declare* all variables in explicit statements before you start using them. Such declarations look quite similar in all languages, e.g. the self-explanatory Pascal (or Modula-2) code

```
VAR Energy, Mass: REAL;
```

```
Index, N-Kids: INTEGER;
```

can be translated into C or C++ as

```
float Energy, Mass;
```

```
int Index, N-Kids;
```

Now, if an *unknown* identifier *Enegry* will be detected by the compiler, it will be flagged as an error (so-called compilation error, as opposed to run-time). The program will have to be fixed before it can be executed at all.

Inexperienced programmers sometimes balk at the "fascist" requirement to declare all variables before use. It may be, indeed, annoying at the beginning, when your program contains six lines of code and when you have to type in another six lines with declarations. It does not, however, take much time to recognize the advantages of this approach: it may take you somewhat longer to compile the program (or to make it acceptable to the BASIC interpreter), but the program will start working properly much sooner. This is why newer versions of FORTRAN and some BASICs have an option to enable declaration checking.

Some languages go to great pains (but why?) to allow for defining types of variables without requiring declarations. For example, a BASIC variable x will be numeric, while x\$ will hold a character string (this is what the dollar sign at the end means). Many BASICs (e.g. the GFA version on the ST) go further: x& may denote an integer, x% a long integer, x| a byte, etc. Hopefully, this looks like a dead-end street of evolution.

Mix or Match?

The difference between real and integer types is not limited to the fact that the numbers they express denote different concepts. The considerations of range and accuracy are the reason that integers and reals are stored in the computer's memory differently, i.e. using different rules to translate the numeric value into the corresponding configuration of bits.

Even if the values of 5 (integer) and 5.0 (real which happens to have an integral value) were stored

in the same amount of memory (say, four bytes), the stored bit patterns will look quite differently. Needless to say, from the computer's point of view the "+" operator translates into an entirely different sequence of machine instructions when it is applied to real objects than when it is used on integer ones. The same is true for many other operators.

And what if the programmer performs an operation on two objects of different types, as in $x+i$ (assuming x is real and i integer)? There are two schools of thought here. One is just to ban any type-mixing (this is what Modula-2 does), while in the other the compiler generates an extra instruction to convert i to a real before doing the addition. Such a conversion is not quite trivial and you pay the price both in terms of program size and execution speed.

Things get worse when we consider assignment of a value of one type to a variable of another. In some cases, as in $x := i+2$ (where i is integer) the solution may be obvious: add 2 to i (in the integer fashion), convert the result into a real, and store it in x . But how should the compiler interpret $i := x+2$? The first step is easy: convert the 2 into a real (smart compilers will even do it at the compile time) and add the numbers in the real mode. Now, if the result is, say, 3.67, how do you store this value in an integer variable, not capable of handling fractional parts?

Just say no and ban it, said Prof. Wirth when designing Modula-2. Others try to guess the programmer's intention and attempt the assignment by converting the real to an integer. This can be done in at least two ways: by truncation (drop the fraction and store a "3" or rounding (find the nearest integer, in this case a "4." Needless to say, different languages may use different approaches here, so watch out when translating such a piece of code from one language to another.

Some attempts to mix types are banned in almost any language. For example, a BASIC statement $LET\ x = s\$$ (assign a string to a numeric variable) does not make much sense and will generate a syntax error. Most languages (with Modula-2 being a major exception) try to be reasonable and allow for mixing of numeric types. We just have to remember that this may involve an extra price in terms of memory and speed; a good rule is to avoid type-mixing when there is no real need for it.

Some programmers call strict type checking (like in Modula-2) fascism and are very vocal about it. Others would argue that in the long run forcing the programmer into strict typing improves the quality of the produced code and makes program development less error-prone. I think the truth is somewhere in-between.

On one hand, restrictions in Modula-2, forbidding (without explicit conversions) mixed operations on, say, short and long integers are, indeed, more irri-

tating than helpful. On the other, the almost unrestricted freedom from type-checking (especially in procedure calls, as it is in the case in FORTRAN and the early, pre-ANSI C)--does not serve almost any purpose and produces bugs which are sometimes not easy to trace. (Luckily, the ANSI C standard introduces argument type matching in function calls, and this makes life much easier!).

Here we just came to another, more important, kind of type-checking, performed (or not) for the parameters used in a subprogram call. This problem will, however, have to wait until we get into subprograms (procedures, functions, or whatever you call 'em).

What Is Ahead

Well, it also looks like we have to postpone our discussion of higher-level aspects of data typing (records, sets, private types and more) until some other time. We barely made it today through the elementary stuff, again, almost the same for most of the programming languages. The real fun will have to wait.

I am beginning to realize that the series may grow bigger than I expected, and the readers' response I'm getting shows that some people (programmers or not) are really *reading* this and even asking for more. The "State of Mind" series will therefore have to be spread over a longer period of time than originally planned, especially because I am not giving up on product reviews and other current subjects in the "ST Toolbox." This means that we will return to programming every other month or so (the similarity to the "new, expanded and improved *STart* magazine" is purely coincidental).

Case Story One: Common Sense

Let us conclude with two examples about the pitfalls of care-free type mixing (and there are *many* more, believe me!).

In the early Seventies, a co-worker turned to me for help with his Ph.D. thesis program, as his estimate was showing that the computations needed twice the amount of time he had on the mainframe, and there was no money to buy more (those were times when you had to *buy* the computer time!).

As I needed to kill some time while drinking the beer he brought, we went through his Algol code line by line. Everything was quite fine and reasonable, all the numerical algorithms quite efficient, except for one thing: a large amount of type-mixing all over the place, without any real need.

At first Jerzy (this is the Polish way to spell George, isn't this a nice language?) would not believe that his problems stemmed from all the hidden, implicit conversions, which the compiler was including into the translated program (obviously, conversions were quite inefficient in that system). But after having all

the mixed-type operations (except those really difficult to avoid) removed, the program speed improved more than twofold! Moreover, after having thrown out some instructions from inside the loops (let's face it, it was not too clever to put them there in the first place) and after pre-computing some repeatedly used fragments of arithmetic expressions, we achieved a factor of four in just one hour of work. (What a cheap way to achieve a hero status!)

Keep in mind, you do not have to be a programming wizard to do such things. Just give it some thought, and usually common sense is enough.

Case Story Two: An Etude in C

Last month I complained that one of the calculator programs I reviewed would not properly compute trigonometric functions of arguments below one degree. For example, a sine of 0.8 degree would be always zero.

Trying to imagine what was causing the program to act in such a way, I made two assumptions. First, the author of the program was not a beginner--looks like he is a good and experienced programmer. Second, the program has been written in C. With these two assumptions, things fell into place, and following this simple example (even if you do not program yourself) may give you some insight into data typing and implicit conversions.

I suspect the programmer was checking whether the real argument x is a zero with an instruction like

```
if (!x) { ... whatever ... }
```

With an integer x things would be obvious: the *not* operator (denoted as "!") returns a TRUE (or one) if x is zero. In other words, this instruction could be translated into Pascal, as

```
IF x=0.0 THEN BEGIN ... END;
```

The shorthand C notation hides some dangers. The "!" operator is defined for *integer* operands only. Facing a *real* x , the compiler will say: "Yep, I know how to negate an integer, here is a real, so let me convert it to integer first, and then do what I am being asked for!". So at first x will be converted to an integer, yielding a zero. This leads to a Pascal translation like

```
IF trunc(x)=0 THEN BEGIN ... END;
```

(with *trunc()* throwing away the fractional part), and this is certainly not what the programmer wanted! The right way (putting aside the dangers of making comparisons on reals) to write this line in C would be

```
if (x==0.0) { ... }
```

Actually, I might have simplified this discussion a little. It is more probable that the program contained a code like `if (x%180) { ... }` with "%" denoting the remainder of a division. This operator, again, is defined for integer operands and faced with a real x , it may call for a truncation, again. Some better compilers (such as Prospero C) will flag this usage as a syntax

error, but some will not, and this was probably the case here.

All right, this is enough of the programming stuff for this month. I hope to come back to it in October.

Wow! Two New ST Compilers!

A couple of months ago, one of our readers found a British ad for *HighSpeed Pascal*, developed in Holland and sold in the UK by HiSoft. The list of features looked very impressive, so our reader bought a copy as soon as he found one at the Windsor show in Canada. And yes, it looks like Prospero and OSS may face stiff competition! The features include, among others, an integrated programming environment, GEM and Line A support and, most important, source compatibility with Borland's *Turbo Pascal 5.0* on the PC.

I am excited about the Turbo compatibility, not because I want to be compatible with all those poor souls who use PC clones, but because Borland extensions to the Pascal standard make it a very good language for serious, large-scale program development. What Borland did (without waiting for the ISO standard committee to settle their differences), was to introduce a *unit* (or module, or segment), not only allowing for independent compilation of libraries of related routines, but also giving the programmer a high degree of control over what data objects and what routines from a unit will be accessible to other units. This makes, believe me, a difference between a quick hack and serious software engineering, and the modular features of *Turbo Pascal* are much stronger than those of C or C++; being second, perhaps, only to Ada (which will be available for the ST when the cows come home).

Yes, it would be nice to have the object-oriented extensions of *Turbo Pascal 6.0*, but even without them *HighSpeed Pascal* may be able to beat anything else on the ST market--provided it works as advertised, has no critical bugs and produces good code.

I am expecting to get a copy of *HighSpeed Pascal* soon and, needless to say, when I complete my first project in it (you don't want me just to quote the user manual, do you?), a review will appear on these pages.

The compiler is being sold (\$144) in the United States by Goldleaf Publishing, recently a major supporter of the ST market. Having acquired the US distribution rights to the whole HiSoft product line, they are also offering *Lattice C v.5* (\$216), shown last year at the DC AtariFest. This is also a tool I have to put my hands on. Again, if the claims regarding this product (including, but not limited to, adherence to the ANSI C standard) are justified, then Goldleaf may have the serious programmer's market on the ST very nicely cornered, thank you.

The Best Book on Sky Computing

My recent trip to Reiter's Scientific bookstore in DC was more than successful. Springer Verlag just re-

leased Astronomy on the Personal Computer by Oliver Montenbruck and Thomas Pfleger from Germany.

Until now, if you wanted to do some programming in astronomy, you had to resort to the classic Astronomical Formulae for Calculators by Jean Meeus or to Astronomy with your Personal Computer by Peter Duffet-Smith. The latter offers code written (what a choice!) in a primitive dialect of BASIC; in spite of all the intelligent care exercised by the author, the enclosed routines are not very convenient to include into your own application written in any language, civilized or not.

The new book is exemplary in this aspect. The authors not only provide clear and precise explanations to all the concepts, procedures and algorithms, but the program code reproduced in the book and enclosed on a floppy (you do not have to send out for it separately, what a relief!) is written in very readable, well-structured and well-documented Pascal. The code is largely independent of the peculiarities of the language, so porting it into C, or even GFA Basic (for those who insist), is a simple mechanical task.

The book describes about 60 algorithms and contains the same number of Pascal procedures, plus the main program modules dealing with the input and output (and illustrating the procedure usage). The code is written in standard Pascal, with some implementation-dependent variations included and commented for the Turbo Pascal and, would't you guess, OSS Pascal+ (known here as OSS Personal Pascal). Looks like, af-

ter all, in some countries the ST is still recognized as a computer.

The algorithms described (and programmed) include computing the motions of Sun, Moon, comets and the planets (some both in high and low accuracy), setting and rising times, eclipses and occultations, and even some astrophotometry, plus small utilities, as e.g. time and co-ordinate conversions etc.

Recompiling some of the programs under *Prospero Pascal* was a quite straightforward job (as soon as I moved the files from a 5.25-inch to a 3.5-inch floppy) and, yes, everything I tried worked just fine.

I am not sure how to interpret the copyright laws in the case of the enclosed code. The copyright notice refers to the "program on the disk," and the disk contains just the source code. Does this mean that if you compile a program, then it can be distributed freely? Maybe some of our readers know more on the subject?

In any case, whether you have any need for the program code or not, you will not regret the \$50 spent on the book, which I soon expect to become the standard reference. Any serious astronomy amateur using a computer (this includes both of you reading this column) has to have a copy.

The only complaint I have about Astronomy on the Personal Computer is that it was released two years after I had done all the hard work with the Solar System computations in *Star Base*. Still, I very much enjoy reading it, and I am sure the updates of my program will highly benefit from this book.

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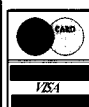


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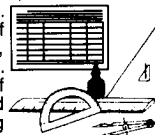
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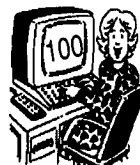
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History of the World

(The Important Stuff, Anyway)

by Stephen LaFevers



Pong

From the time television was first demonstrated in the (believe it or not) late 1890s until the mid 1970s, it was used to provide passive experiences. All you could do with a TV set was sit and stare at it. Then Nolan Bushnell, founder of Atari, produced Pong, the first video game machine. Suddenly, you could interact with the TV set and the nature of television was changed for all time.

Pong wasn't much by today's standards. All it did was let you bat a square little "ball" around the screen, but at a time when video recorders used one inch tape, and the personal computer didn't even exist, Pong was quite an innovation. So much so, in fact, that it started a national craze. The first time I rode on a DC-10, there were Pong games set up in the lounge (yes, they had lounges on airliners back then.) I just had to have one, and did; but no one sells such a machine today.

2600 VCS

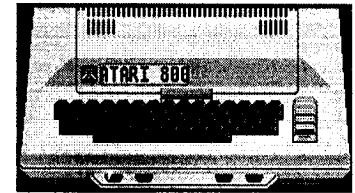
Soon, many companies were selling versions of Pong, but Bushnell and Atari moved on to a new concept: a programmable video computer game system they called the Atari 2600 VCS. It took the nation by storm and, within months, everyone and his dog was producing game cartridges for it. Not to be outdone, Magnavox, Emerson, Mattel, Coleco and many other companies brought out similar systems. I liked the Odyssey2, but bought an Atari because there was a Basic cartridge for it that allowed you to write your own programs, graphics and music. (Hey, that

makes Atari the first company to sell a personal computer!) Of all the brands of machine sold in this class, *only* the Atari 2600 VCS is still available today.

Home Computers

By the end of the decade, the first personal computer (called home computers at the time) were trying to find a market. The first one I saw was a Commodore Pet. I wanted one, but there was no software except what you wrote yourself, and the Pet was pretty limited. Besides, I couldn't figure out a way to convince my wife that I needed one. Soon, the Apple I came out to be replaced almost immediately by the Apple II. The Apple had some possibilities, but also had limited graphics, required a monochrome monitor, was very expensive and still had little software. When Atari brought its computers to market, they were revolutionary. The 400 and 800 Atari computers had remarkable sound capabilities, player missile graphics, lots of color, and would work on a TV set! Best of all, there was plenty of software, including a word processor.

Word Processor! Suddenly, I had a valid reason to purchase a computer. I did a lot of writing, wanted to do a book, and word processing was something I could show my wife. Now, which computer should I buy? Pet had no word processor, so that was out. Apple was expensive, and Atari had *Star Raiders!* That settled it, not only for me, but for most people who bothered to check out available computers before buying. *Star Raiders* and word processing, too. What more could anyone ask?



Atari 400 and 800

I bought a 400 with 32K of RAM, used it for a few months, then gave it to my kids and got an 800 with 48K (who could ever use so much RAM?), an 810 disk drive, 825 printer, acoustic modem, 410 tape drive, and my wife got me a light pen for my birthday. I was in heaven!

Within months, there were many personal computers on the market: Intellivision, Adam, TI-99/4, Timex/Sinclare, Osborn, Kaypro. There was an explosion of awareness of and desire for these "home" computers. All the manufacturers were charging and making a fortune. Then Commodore struck back with the VIC-20.

Commodore Vic 20 and 64

The VIC-20 was so underpowered as to be really little more than a game machine, but it looked like a computer and was cheap. With the VIC-20 and its big brother, the Commodore 64, then head of Commodore, Jack Tramiel, started a computer price war that eventually drove nearly all the manufacturers out of the personal computer business except for Apple, Atari and Radio Shack, and they were badly shaken. Commodore stock soared nearly 1000%.

Atari 1200, 1450, 800XL

In the meantime, I happily wrote two books on the 800, used it to add graphics and sound to

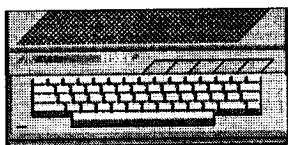
video training tapes, put out a monthly newsletter, and played a lot of *Star Raiders*. When the Atari 1200 computer came out, I wanted one, but was determined to wait for the 1450 I'd heard so much about. I waited and waited, finally settling for an 800XL when that became available. (A few years later, I did buy a 1200--what a machine! You've got to feel that keyboard to believe it.) Along with the 800XL, I picked up an *AtariWriter* cartridge--a big improvement over the *Atari Word Processor* I had been using--and a 1027 letter quality printer.

IBM PC

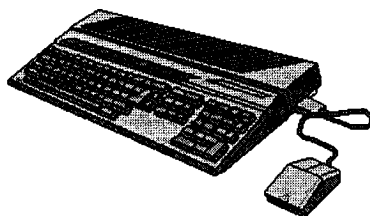
Somewhere around this time, IBM noticed that hardly anyone was making personal computers anymore. Was this a void that could be filled by a maker of mainframe and minicomputers? Why not? IBM brought to market a new personal machine with 64K of RAM ("all any user could possibly need") and locked America into a system of limited memory that programmers, manufacturers, and users have been fighting to get around ever since.

Atari 130XE

I finished my third book on the 800XL wishing I had more than 64K of memory. In answer to my prayers, Atari soon released the 130XE which, together with *AtariWriter Plus*, gave me an incredible 128K to play with. It just couldn't get any better. On the 130XE I started my fourth book, discovered *Typesetter* and started doing a lot more desktop publishing, and, with *Movie Maker* and *Message Display*, jumped deeply into desktop video.



ATARI



Atari 520ST

Within months, Atari's 520ST was blowing my and most other people's minds. Critics praised its speed, ease of use, fantastic graphics, colors, and sound capabilities. They loved it for not having a 64/640K mental block, and could not believe the price. It was on the cover of every major computer magazine in the country and took Europe by storm. Most Americans, however, thought "Gee, that's nice. Why can't my IBM be more like that?" and went right on driving their Model-Ts, er, XT's. Only the most intelligent (and the cheap-skates) switched to the new Atari, but there was enough commotion that soon every clone maker, and even IBM, began trying to make their machines look, act, and feel more like an Atari ST.

Atari 1040ST

I, however, was fat, dumb, and happy with my 130XE system for a long time. Eventually, though, my resistance broke down and I found myself with a 1040ST instead of money. I finished my fourth book on the 1040. It was a real pleasure doing search and replace on the entire book at once rather than chapter by chapter as was necessary with the 130XE, and it was a lot faster.

It didn't take me long to discover that 1040K was not a lot of memory. What with desk accessories, terminate and stay resident programs, alternative desktops, a good thesaurus, virus checkers, speed enhancement software, etc., I was lucky to have any memory left after the computer booted up. How could I ever have thought that 48K was a lot of memory? Besides, I wanted to get a new 804 Laser

Printer and that required a megabyte just to turn on.

Atari Mega ST4

So, in went my 1040ST to the Atari Store, along with my life savings and a mortgage on my first born child, and out came a Mega-ST4, hard drive, and laser printer. (My wife now does all her word processing on the 130XE.)

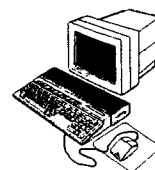
Finally, I had everything I could possibly want in a computer, yes? Not quite. I moved around a lot on the job and needed something more portable. I tried a SHARP laptop. It wasn't an Atari, but it was light, had 640K RAM, and it worked. I hated it. It was so IBMish! You really couldn't do anything with it, you know? Not like you could with an Atari. Oh, you could type, but to do anything else you had to keep your nose in a book for so long you lost interest. Even with all the books, though, you basically couldn't do much but type. After all, it was very IBMish.

Atari STacy

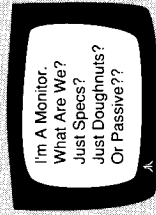
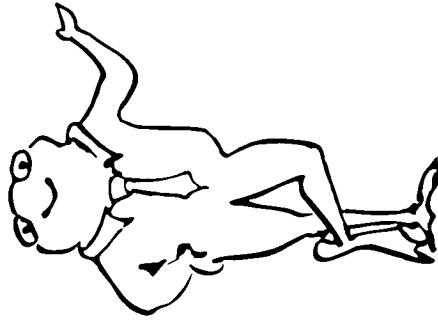
Then Atari made STacy, and the world was right again, and I was broke and in hock again. STacy could do anything my Mega could, and it had a handle on it. When I got STacy, I promised I was finished buying computers. I was in the poor house. What else was there worth buying, anyway?

STE, TT, Notebooks, ...

Well, Atari did it to me again. The only thing that's held me back so far is that I can't decide whether to get a Mega STe or a TT. That, and the desire to stay out of debtor's prison. I wouldn't exactly call myself an Atari Addict (like this guy I know who never stops drinking doesn't call himself an alcoholic), but, gee, those new notebook computers Atari showed in Germany a few months ago sure looked good!



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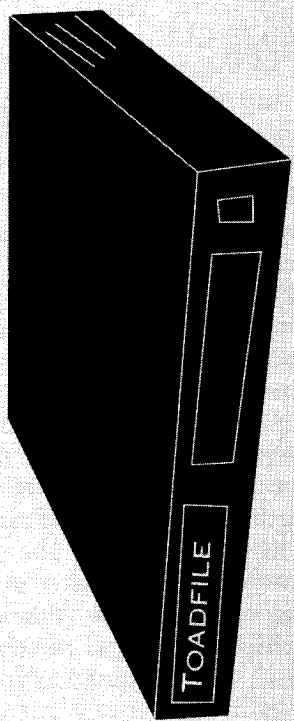
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Quartet and Stereo Playback

Is This Your Daddy's Rockmobile?

by Mike Heininger (c) 1991

Four-Track Synthesizer

If you're looking for exotic products with common sense features that average users can quickly enjoy without a master's degree, say hello to *Quartet* and *Playback*, the innovative four-track stereo synthesizer and stereo output cartridge from Britain's Microdeal. Faster than you can say four-voice polyphonic, *Quartet* (stereo version 1.5) has you listening and composing music in four different voices (i.e., musical sounds such as different instruments). What's more, you barely realize you're actually mucking about in those awful tracks and MIDI (musical instrument digital interface).

Teaming *Quartet* with the new *Stereo Playback*, introduced in January 1991, provides outstanding stereo sound from whatever amplified speakers you plug into. But without *Stereo Playback*, the stereo sound was fuzzy used only with ST and Tweety Board. (When this happens using *Music Studio*, I can get in the design instrument section and turn off the "noise" setting, which clears up the sound.) Using only the ST monitor provides the usual unspectacular mono sound.

Reminder: Be sure to turn OFF your Atari ST, STE, or STF before connecting the 2x3-inch *Playback* cartridge to the ST's 128k ROM (read only memory) cartridge port next to the two MIDI ports. This is good advice when adding any component to your computer setup.

Stereo Playback Elusive

Stereo Playback is so new and British that by April it still was not readily available, even from the 800-number advertisers in *Current Notes*. *Quartet* was selling in places like Rising Star (Dayton, Ohio, 800-252-2787) for \$35, the sound sampler *Replay VIII* for around \$100, and the new lower-priced *Master Sound 2* for about \$70. Michtron (which has moved to Delaware and is the Microdeal U.S. contact) lists *Quartet* for \$59.95 and *Stereo Playback* for \$79.95.

Microdeal resembles America's Dr. T in developing a family of music products frequently updated and interbred. For example, the Microdeal product most widely available in the United States seems to be the sound sampler *Replay VIII*. Sound samplers allow custom importation and manipulation of sounds from a variety of sources, including cassette and compact disc players.

And the Beat Goes On

Like the proverbial duck, *Replay VIII* walks a lot like *Playback*--the cartridge looks the same (no kidding, huh?), and *Playback* includes a "full blown" digital drum machine, *Drumbeat Stereo*, spawned as a completely rewritten stereo successor to *Drumbeat* which was sold in *Replay IV* and *Replay VIII*.

I toyed briefly with *Replay VIII* at L&Y, but soon concluded this is something more for Frankenstein's laboratory--you have to dig tinkering big time. No wonder I couldn't get the three-dimensional FFT (Fast Fourier Transform) display screen to work.

Master Sound 2, which I haven't seen, is touted as a "low cost, high quality sound sampler for the Atari ST and STE." The cartridge, which also looks like the one in *Replay VIII* and *Quartet*, also plugs into the ROM port on the ST's MIDI side.

Sound samplers deserve their own article. For the time being, let's just say sound sampling is one extreme of music making. Electronic music wouldn't exist without programmers and hobbyists digitally capturing and literally fine tuning sounds into voices we use to make music.

Quartet Excellently Intuitive

No need to be modest--in *Quartet* you ARE doing the whip and chair routine on tracks and MIDI. The taming is no less significant simply because it's so painless. *Quartet* defangs MIDI as an automatic transmission smooths a car--you still need to know where you're going, but it's a lot easier getting there.

Another tasteful understatement is *Quartet's* attitude toward looping. Looping means endlessly repeating whatever input you make. Suppose you play one whole note (i.e., a note that gets four counts in 4/4 time). *Quartet* plays your note: once ... twice ... again ... and again ... until you tell it to stop.

Monotonous? Listen again. Many popular tunes repeat low notes for dramatic undertone. If you want that sort of underlay for 16 measures, why should you have to "stick shift" in 16 whole notes when *Quartet* expects to do it for you? So just play one whole note, and *Quartet* will repeat it until your music ends or until you add other notes.

Now go to V2 (voice 2, same as track 2). With the mouse, click on a quarter note symbol, then click four times on the top line of the bass staff. You just made four bass drum notes. You could have clicked any-

where on either the treble (top) staff or bass (bottom) staff, but this line gives you the most authentic drum sound the way it was sampled (i.e., converted into digital sounds).

A Star Is Born?

Blimey, Yank, you are well on your way to the Top 40! Now go to voice 3, select Syn 2 (the second synthesizer), and make up some kind of melody. Yeah, for real-time input just ripple the plastics on the electronic keyboard that's plugged into your MIDI port (you could click in mouse notes, too, but if you've read this far you must have a MIDI instrument).

Then go to voice 4, select Pian (piano) and do the same with a countermelody or harmony. My yes, you can smell the royalties already (as in money, not nobility--the program is not THAT British).

Admittedly, it isn't quite so easy to compose a hit tune. Or maybe even something your significant other wants to hear. But the principles are sound (pun intended). It just takes a little practice.

Naturally, the first thing you'll do in *Quartet* is click down the demos and hear the possibilities. *Quartet's* demos are really fun, evoking images of four electronic boppers doing their thing sans written music, just ripping along on pure impulse. Nice stuff -- you'll want to hear at least six of the eight demos over and over, studying each voice (track) to see how this particular program constructs music.

Now the Flip Side

Quartet has an unpretentious but effective 78-page manual that solicits suggestions for improvements. Here are mine:

1. Fix the sharpen key, and add the ability to flatten as well as sharpen notes. My *Quartet* disk would not sharpen as promised because the \sharp key would not work. Obviously, every music program must be able to handle every musical note to be competitive. True, a note is manipulated a half step whether raised by sharpening or lowering by flattening, but if all musical keys could be so easily handled with sharps, flats never would have been invented.

2. Add at least four more staves for at least eight total voices (channels). Even budget competition such as *Music Studio* offers eight tracks, and *EZ-Track Plus* has 20.

3. Add the capability to write lyrics.

4. Add the capability to see all four or eight or whatever staves on screen at the same time, not just one treble and bass duo for each voice; yes, vertical scrolling probably will be necessary.

5. Put the VU meter (which shows the voices playing) somewhere other than the center of the screen where it obscures whatever notes you might want to be viewing during play.



Synthesizer and Stereo, But ...

No doubt about it, *Quartet* and *Stereo Playback* are indeed a dynamic duo. *Quartet* does turn the ST into a four-voice polyphonic music synthesizer. You can hear its great sound monophonically through the normal monitor (it doesn't work well with Tweety Board) but the real treat is in stereo through the *Stereo Playback* cartridge.

Playback's sound is superior to Tweety Board. Unfortunately, as with Tweety Board, many programs will not use its capabilities; so far, it looks as if only Microdeal and maybe some British public domain stuff are using *Playback*. To hear *Quartet* and *Playback* in stereo through amplified speakers such as a cassette tape recorder, just press F4.

The variable sample playback works from 4 to 16 kHz with up to 20 musical samples acceptable in memory at one time (although you can hear only four voices at once).

MIDI Inputs, Too

You can lay down the four tracks in real time by playing your keyboard connected through the MIDI ports to the Atari. But because *Quartet* and *Playback* do not make sound through MIDI, turn down the volume on your MIDI instrument speakers to avoid cacophony. That way you will hear only the *Quartet* instrumentation being recorded.

Playback uses standard twin RCA plug connectors. You will need to find a cable with twin male RCA plugs for the *Playback* cartridge and whatever sex turns on your amplified speakers (probably two more male plugs).

As mentioned, *Playback* also includes *Drumbeat*, a two-channel drum sequencer allowing up to 15 samples to be loaded into the kit. Up to 50 patterns can be in memory at once, the patterns can be assembled into as many as 99 entries to compose a song, and up to 10 songs can be in memory at once.

Whew! Hope some of you are drummers who can be impressed by that. *Playback* also has a stereo demo driver--a graphics display adaptable with a paint program for customization. Finally, home programmers

can dabble with sample stereo routines for Hi-Soft Basic, GFA Basic, and Machine code.

Kowabunga, a Niche!

Quartet and *Stereo Playback* thus appear to have found one of those elusive market niches, giving the serious home musician another alternative in moderately priced music software/hardware. Not since I first discovered Atari ST and *Music Studio* have I enjoyed a music program as much as *Quartet* bundled with *Stereo Playback*.

With minimum effort, it is not difficult to understand most of the techniques and easily make music. Neither program is copy-protected, so they even work joyfully on a hard disk!

The default looping lets you mix all sorts of different lengths in your four tracks and get something that sounds like music, AND IN FOUR DIFFERENT VOICES AS THE DEFAULT!

This feature cannot be overemphasized, as anyone who has wrestled with setting up separate tracks in conventional MIDI channels will testify.

Help! Where Am I?

The bad news about the default looping is that once you want to clean up those inevitable clinker notes, you play hell finding where they and you are in the composition. The looping, like any great hideously complex math formula, apparently can be up to 99 layers thick! Good luck, Beethoven.

Fortunately, those loopy layers don't happen by default. You have to put them in when you get recklessly creative. Nevertheless, even with one layer of looping, and with no simultaneous display of more than one voice, editing is tough.

Quartet usually does a commendable job of automatically establishing measure lines whether your input is from mouse or MIDI keyboard. But sometimes *Quartet* seems to get a bit overwhelmed by composer casualness when measures don't always sort themselves out on schedule.

And the Music Goes Round

Yet, somehow the music always keeps playing. When you're just ad-libbing instrumental rock tunes, you can get away with considerable sloppiness. But when you try to copy tunes from a songbook, things get bothersome.

Number 1, you must have sharps and flats to replicate exact keys. The *Quartet* sharp key didn't work and there is no flat key. Number 2, I couldn't get as precise a MIDI input as through other programs that transmit sound through the MIDI ports. Maybe it's my imagination, but I couldn't seem to get even four bass drum beats to come out exactly as four quarter notes until I clicked them in with the mouse.

All in all, *Quartet* and *Playback* are welcome additions to the Atari MIDI array. Unfortunately, I can't recommend *Quartet* until it adds sharp and flat key capability. And when it does get them, *Quartet* still isn't quite as intuitive as *EZ-Track Plus* when it comes to composing, and it lacks capability such as *EZ-Score Plus* for score printout.

Yet, I don't know of any easier, faster, fun way to immediately be playing and writing instrumental rock music with four different stereo voices. That's such a strong endorsement that when the sharp key is fixed, and the flat key added along with, perhaps later, some more tracks and lyrics capability, *Quartet* and *Playback* will be top contenders in the moderately priced MIDI market.

Quartet and *Playback* are available from Microdeal via Michtron, 3201 Drummond Plaza, Newark, DE 19711; telephone (302) 454-7946. List price: \$59.95 for *Quartet*, \$79.95 for *Playback*. Look for discounts. Single-sided drives will work but can't access some additional samples on side 2. Must use copy program to back up disks, which are NOT copy-protected. Runs in medium or high resolution. *Playback* needs suitable cable, e.g., twin RCA plugs (probably both ends male) and external powered speakers (unless STE) for stereo sound. Both have multi disks

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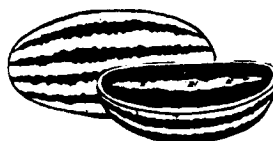
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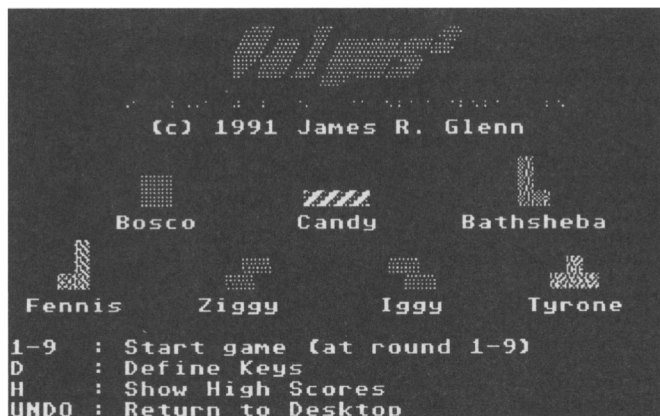
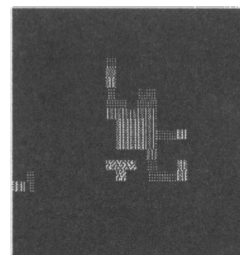
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The Valgus²Tetrys Wars

Just When We Thought It Was Over

Reviewed by Frank Sommers



The Household Molester

First there was that Soviet, that “blindingly creative programmer” who wrote *Tetrys*. *Tetrys*? Yes, that simple little program with the odd-shaped falling blocks that you simply put in a flat row, so they will disappear and you can start another row, and an ever higher score.

Yawn. Deep yawn from the uninitiated, from those that have never cursed their computer because of articles not written, or the legal briefs unprepared, or notes to friends unnoted, or bills unpaid, or children and wives untended. And the cursing is because *Tetrys* wouldn’t let you be responsible about your life, until you’d mastered the little (rhymes with mastered).

Then some Yankee “blindingly creative programmer” had to come up with *Valgus*. The same idea, but two people could play it head to head and try to crush their opponents with sheer will power. So it was a standoff, a detente. One for the Sovs and one for us.

Then the Curse of Welltris

BANG! Another rocket in from Moscow. *Welltris* had landed -- the super sophisticated 3-D *Tetrys* that blasts away the brain’s neurons with its maddening play, as three-dimensional blocks fall, down, down into a huge square well, where you have to manipulate them with the speed of a flower-drunk bee to make them fit flat and disappear. And just as that was happening to your ST, James R. Glenn, Jr., author of *Valgus*, had sold out to the devil for a fiendish idea, termed “*Valgus2*,” (like in $8^2=64$).

“And how can simplicity be simplified to become even harder to beat,” you might justifiably ask. How

can a little solid square in the middle of the screen have borders built around it with variously colored and variously shaped blocks, with one border disappearing as it is completed and the other borders, in various degrees of completion, then shrinking in around the small white square, how can such a one-watt idea like that become a fixation? Well, it did and BBS and PD disk suppliers, including *Current Notes*, did a land office business in putting out demo programs. Quickly it dominated the “block addicted” crowd.

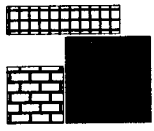
Something Else Was Out There

Little did we PD *Valgus2* players realize what was lurking out there. Glenn, fully co-opted by Satan now, had designed a shareware version of the program that had several “additional” features. Sure, you could design your own key action, if a joystick was not your choice of weapons, and you could go from level one to level nine, and vary the speed of the cursor movement with the Function Keys, and you Let’s stop. Let’s just imagine, going from level one, where after about three “rounds,” things just pile up on you and suddenly “endsville” is at hand, up to level eight, where every alternate block is accompanied by a “stealth mate” coming from another direction toward the center square. The only way you can control it is to surrender control of the first block for a split second by hitting the return key, position the stealth intruder as it plows relentlessly toward its resting place, and then flash back to the first block, hopefully, in time to avoid having it striking an unintended part of the border and ruining that particular border forever.

In fact, it becomes so “insane” you discover you’re laughing out loud at the inanity of it all. Laughing, that is, as you push “undo” so you can start over with a clean uncorrupted screen.

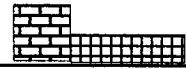
It’s called, “*Valgus2*.” The demo program for it will teach you the ropes, some of them, that is, because the shareware version, *Valgus2 Ver. 3.0*, has a few more ropes than you have thus far seen. *Current Notes* ST Library Disk #565 will bring you the demo version or you can find it on the Atari SIG’s on CompuServe (file VSQDEM.LZH in library 2) and GENie (file VSQDEM.LZH in library 8). But for the “real thing” send \$8 to James R. Glenn, 8252 The Midway, Annandale, VA 22003.

And then be prepared to let things slide for awhile.



Atari 8-Bit Tetris Clones: *Valgus 2 vs. Tetrix*

Reviewed by Raymond Borsick



Valgus 2 (Valgus Squared), a strategy game for one player, is an interesting variation of Tetris, the game made popular by NES and GameBoy.

If you haven't played *Tetris*, the object is quite simple. Randomly selected blocks of various shapes are dropped into a pit. Your goal is to position the blocks in such a way as to fill in a solid row of squares. If you are successful, the completed row is erased and any blocks above that row fall to the bottom of the pit. The game continues until the blocks reach the top of the pit. Since a true commercial version of *Tetris* isn't available for the Atari 8-bit, I compared *Valgus 2* to Darryl Yong's *Tetrix*, which I consider to be one of the better *Tetris* clones (I've played five so far).

While *Tetrix* gameplay is based upon the original, the object of *Valgus 2* is to complete concentric squares instead of a single row. The initial playfield consists of a small 3x3 core square. A single block appears at one of the edges of the screen and immediately begins to move towards the opposite edge. Use your joystick to steer the block in any direction not opposite the direction the block is moving. Press the fire button to rotate the piece. The block travels until it hits another piece or the edge of the playfield. At that point portions of the block change color or pattern to help you determine where to place subsequent pieces. When a ring of squares is completed, it is erased and any outer pieces fall towards the core square. Completing a predetermined number of rings awards bonus points and moves you to the next level with a fresh screen and faster moving blocks.

Valgus 2 arrived on an unprotected, self booting disk. If you wish, you can rename the AUTORUN.SYS file and run the game from DOS Option L. Do NOT rename the support files--VSQ.DAT and SCORES.VSQ --or the game won't load! Neither game requires BASIC. Both games ran OK on my XE using MYDOS, AtariDOS 2.5, and DOS XE.

The graphics in both games are adequate. It was somewhat difficult to read the text and scores on the *Valgus 2* screen, due to the use of XL/XE mode 12, the so-called multi-color text mode. This is especially true when viewed on a TV set. However, the use of this graphics mode does make the *Valgus 2* game area more visually appealing than *Tetrix*.

Tetrix enjoys a slight edge in the use of sound, although neither program breaks any new ground. Pretty much 2600 vintage beeps and bops.

Valgus 2 is definitely more challenging than *Tetrix* and held my attention for a longer time. After a dozen or so games of *Tetrix*, I was able to regularly progress to Level Four. I had to play many more games than that before I was able to achieve similar results with *Valgus 2*.

Valgus 2 is not without its nuisances, although they are relatively minor. The game saves any top ten scores to driveone. Period. This means you must enter your name via the keyboard, and you won't be able to turn off your drive when playing the game. A toggle feature would be nice. You must press the START key to begin a new game; the program doesn't recognize the joystick trigger. When I'm playing games I like to kick back and relax, and having to use the keyboard after every game slows things down.

Documentation for *Valgus* is rather sparse; the package I reviewed contained two typewritten pages. Unlike *Tetrix*, there were no docs on the disk.

Tetrix has a feature which allows you to preview the next block while positioning the current piece. *Valgus 2* doesn't offer this option. Instead, an on-screen chart tabulates the number of times a particular block has been played. Interesting, I suppose, but the knowledge doesn't add anything to the game.

At \$12.00 shareware, I feel *Valgus 2* is a bit pricey. Generally, your contribution for shareware entitles you to written docs, additional features, updates, etc. The information I received from the author doesn't appear to offer any advantages to registered users. Of course, if you like and use this software you should do your part to encourage new 8-bit software and this author in particular.

Overall, I'd give *Valgus 2* a C+. Although lacking the bells and whistles found in most commercial software, it's still a good adaptation of a very popular game. If you're looking for a more challenging alternative to *Tetris*, *Valgus 2* could be just the ticket.

One final note. The author mentions that while *Valgus 2* for the 8-bit is new, the ST version -- CN ST Disk #533 -- was released about eight months ago. That's right! This game has been ported TO the 8-bit!!

[*Valgus 2*, James Glenn, Jr., 8252 The Midway, Annandale, VA 22003. XL/XE/XEGS, 48K RAM, joystick required Shareware, \$12.00.]

[*Tetrix*, Sagamore Software, 2104 Arapahoe Dr, Lafayette, IN 47905 PD, \$5.]



Treasure Trap

Denizens of the Deep

Review by Don Elmore



We are all probably familiar with the terms white collar and blue collar workers, no? Well, Electronic Zoo (of Baltimore, MD), through "Treasure Trap," provides us with a pleasurable insight into the zany world of the bronze collar worker. Brass and canvas "business" suits (over 125 lbs each) furnished by Sargasso Row, convenient office locations; only a commute of 300 feet. Straight down! And ... we're talking a real pressure cooker environment, here.

"Treasure Trap" is described as a plunge into the hostile undersea environment of the deep sea treasure diver, testing both your strategic planning and reflexes as you attempt to retrieve gold from a sunken wreck. I found it to be every bit of that, and more. The time frame of the game is the late 1920s. That was when the S.S. Poon, yes, you read that correctly, the S.S. Poon, located the wreck of the gold-laden Esmeralda, a British freighter that sank in 50 fathoms of water in the Pacific Ocean in January of 1856.

Hull Down and Waiting

She was returning from Africa and carried \$20 million dollars worth of gold bars to the bottom with her. The gold treasure is now (March, 1927) estimated at \$50 million, which is the primary force driving the famed treasure diver Howard Kelp. From the survivors' records, we learned that an early morning explosion in the boiler room converted the freighter into an instant submersible. The cargo broke free when the Esmeralda listed sharply on her way down. So, what we've got is the Esmeralda resting (hull down) on the bottom of the Pacific Ocean in 300 feet of water, with gold bars scattered throughout her 100 plus holds, rooms, and cabins. We are also cautioned about the location of the wreck in terms of the briny beasties. Seems she bottomed in an area of the Pacific famous for the most dangerous (and plentiful) hostile aquatic creatures in the sea.

In fact, Electronic Zoo spares no effort to ensure a wide variety of dangerous denizens of the deep. They even threw in some deadly Piranhas, describing them as tooth-filled grinning fish traveling individually or in small schools and urging you to run away if you see them. Now, I am certainly no ichthyologist, but I do know that when you have a South American fresh water carnivore chasing you around a sunken wreck in 300 feet of salt water ocean...you are in trouble!!

Air to Go

Granted, given today's technology, retrieving the gold from 300 feet of depth would pose few problems, but trying it in March 1927 is really pushing the envelope, so to speak. While your goal is to find all of the gold, your primary concern is to stay alive, and the S.S. Poon has done everything possible to help you. Bottles of air have been placed throughout the wreck for use in an emergency, so you can concentrate more fully on avoiding the creatures and acquiring the gold.

Now, besides the Piranhas (that evidently took a wrong turn at the Orinoco River) what else will be actively planning on having you for dinner? Well, poisonous sea anemones for one. Described by the game manual as not very mobile, I (who have done a fair amount of snorkeling and free diving) found them to be extremely mobile, much more than the ones that I've admired on coral reefs. I guess, EZ means not very mobile compared to the rest of the critters. Like the crabs. The manual says they are fast and nasty and I have to agree with the description. So, also, are the electric eels. They can "shock the life out of you," and are fast, but only swim in a straight line and can, therefore, be fairly easily avoided.

You also got Hammerhead sharks (one of Treasure Trap's speediest denizens of the deep), octopi, starfish, stingrays, jellyfish, whirlpools and bubbles. The starfish slither along the floor and woe is you if they hit you. The stingrays flap along at various levels in the rooms, and while their pointed tails can sting you, they can also help you navigate some of the rooms (more on this later). The bubbles are deadly! Barrels of an unknown substance ruptured and the bubbles released are lethal. The whirlpools are not necessarily fatal, but they do transport you to a new location, and you may never find your way back. The jellyfish (complete with poisonous tendrils) usually only move up and down, but they can hover right over you and keep you from jumping.

Goodies Abound

What else can you find in the rooms? Well, air bottles for starters. They are scattered throughout the wreck. In fact, there is one small, narrow hold that has rows and rows of air bottles. Find that room and you'll have plenty of air for your dive. You pick up and use a new bottle of air by just touching it, but you had better be sure that your present tank is at least more than

half empty...if not, you'll overinflate yourself and won't be able to move for a while. There's nothing the briny beasties like more than an immobile morsel!

Don't forget the keys. Well, they don't really look like keys; they are all sorts of colors and shapes and can be found lying around on the decks of the rooms. Jump on them and hit the "D" key to pick them up. Yes, the "D" key...stands for picking up or dropping objects. You have room to hang three different keys on hooks next to the gold indicator on the outer bulkhead (they go there automatically when you pick them up). Above the doorframe of each door in any given room, is a symbol indicating which color and shape key is needed. So, when you find more than three different keys, be sure to note the shape, color and room number for each of the remaining keys found.

There are also some red snappers, called Smart Fish. They are friendly, though. For each 80 bars of gold, you "catch" a Smart Fish which is stored in a small aquarium on the outer bulkhead below the gold indicator and key rack. Why do we want Smart Fish? Because the rest of the creatures are scared to death of them, and if you find yourself hopelessly embroiled in a room full of decidedly unfriendly aquatic enemies (and have a Smart Fish standing by), hit the "S" key and ole big red will swim in and devour everything that can possibly harm you. EZ also provides a tablet entitled "Divers Log" with spaces to list all the pertinent highlights of each dive.

However, there are some other very important items to track, and the best way to do that is by keeping a detailed map of rooms or holds visited and carefully noting which keys or how many air bottles are left behind in each. Remember, you can only keep three keys current and you can't fill up with air until your tank is at least half empty. So, it is very nice to know that while in room 82, you're looking at a blue key symbol and know that you have a spare oxygen bottle in say...room 74, with a blue, triangular key on the floor as well. You retrace your steps to 74, press the "D" key to drop one of your keys, pick up the blue one and you are ready to trek back to 82 and head on out through the blue keyed door.

Mapping the Wreck

To help you with the mapping effort, each time you enter another room, for a short time you'll see an "M" flashing in the upper left hand corner of the screen. Press the "M" key and a grid of the wreck is displayed with the rooms you've entered revealed. They are numbered and really do help orient you and help plan your moves (especially if a friendly whirlpool has transported you clear across the wreck!).

Another feature I found very useful is the "P" key, which (when pressed) pauses the game. I'm not in the least bit ashamed to admit that as soon as I enter a new room, I "pause" to take a close look around, not-

ing the location of gold, air bottles, keys, etc...as well as the briny beasties eagerly awaiting me. When I figure that I know pretty well how I am going to "work" the room, I hit the joystick's fire button, and away we go.

Most of the rooms and holds have boxes, crates, barrels and even furniture (tables & chairs) scattered around the deck. Some of the boxes are floating with the current. You can push them around and climb on them to reach higher objects or doors. You can even "bum a ride" from a stingray if he (she) is going your way. One of the narrow rooms has absolutely nothing of value in it, but in order to exit through the doorway at the other end, you have to get past six crabs marching back and forth, blocking you. Ever see crabs goosestep? There is a stingray swimming back and forth along the length of the room. There is no way to run past, or jump over, the crabs, and if you accidentally run into the stingray (or visa versa), you'll lose a life. Solution? Jump on the stingray's back and ride him (her?) over the marching crabs to the door at the other end of the room.

The game has a save/restore feature, so keep a blank, formatted disk handy. You can only save a game to disk after obtaining your 50th bar of gold, and again at each multiple of 50 after that.

What do I like about the game? Its overall "playability." No two rooms are the same so there is a constant variety of challenges. And the problems presented are surmountable, so my frustration index stays relatively low. The constantly changing mix of challenges keeps me alert. Usually when a crusty crab, or other denizen, takes one of my lives, I know that he (or she) would turn right after running into the barrel, I just forgot to factor that into my strategy for the play of that particular room.

What don't I like about the game? Well, the play screen is considerably smaller than the monitor screen, and with my aging eyes, I sure would like to be able to have some of the smaller details enlarged a little. Also, I was initially confused a bit regarding Sr. Kelp's orientation. He moves about in the four basic compass directions, but your player/view angle is looking downward into the rooms from a point above the southeast corner. So, instead of Kelp trundling along in a northward (or southward, eastward, etc) direction, he goes towards the northeast, southeast, northwest or southwest. That took a little getting used to.

Twentieth Century Bikinis!

Bottom line? I like the game and recommend it. I have almost completed the game and am eagerly looking forward to the finish. Treasure Trap's artwork designer, Paul McLaughlin comments that the woman's swimsuit in the end game/win sequence is definitely NOT typical of the 1920s, and that I do want to see!!

Eyes: demonic. Hair: unkempt, long, greasy. Nose: large, bulbous. Ears: tiny, tinny looking. Stubble on chin. Eyebrows: bushy, connected, something Tarzan would recognize. Neck: thin, wrinkled, and let's add, say, a patch over his left eye for style.

OK. So you've already seen my boss.

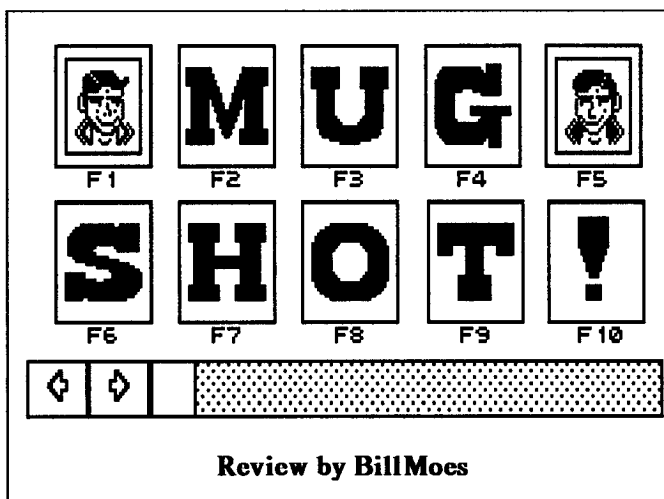
Mug Shot! Plus allows each of us to tap our creative thoughts, developing—most quickly and easily—those characters from our dreams, from our nightmares, or from our reality.

There are two work screens in *Mug Shot! Plus*.

The "Mug Module" screen offers ten parts bins, such as hair, nose, eyes, neck, ears, glasses, etc. Not all parts boxes need to be used, of course. There are icons (GEM drop-down menus are not used) to split and move these parts within the mug window. The parts may be squeezed together, pulled apart, moved, resized, twisted around, shrunk, enlarged, flipped, or flopped. Icons may be selected with the mouse or by keyboard.

Generally, these icons allow an amazing degree of flexibility in reshaping any mug part. Combinations of mouse clicks and several keys on the keyboard allow these actions to be done quickly or slowly and precisely. Also, the mouse may be used to grab and quickly move any mug part over greater distances.

There are two large parts files supplied with the software: famous people and cartoon characters. (No, there won't be any jokes about the interchangeability



of these two categories.) Unfortunately, it's necessary to cycle through each parts bin to find a specific part. It would have been helpful if the publisher had printed the part pieces, showing what was available at one quick glance.

With the famous people file, well-known figures may be created and altered. (What would Elvis look like if he were bald?) The cartoon file is

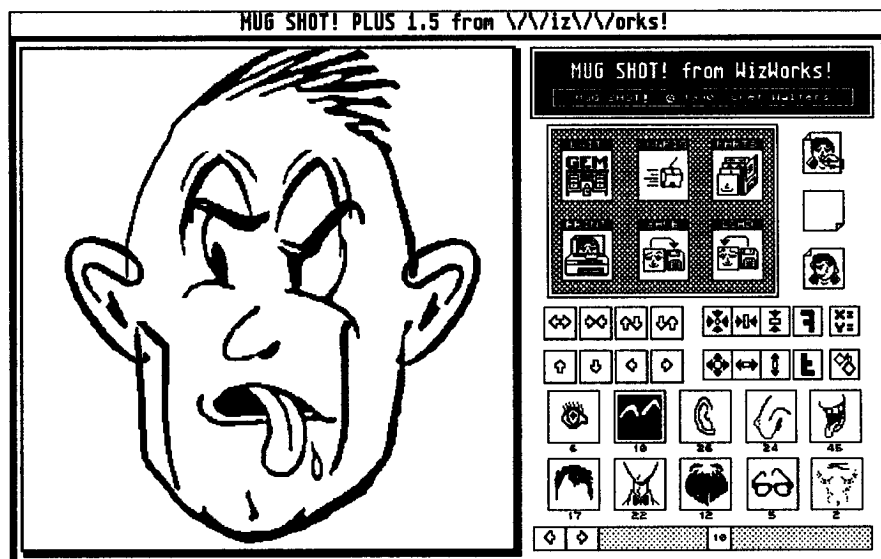
more free-form. Each file includes about 20 to 40 parts in each of the 10 bins. Clearly, the potential number of combinations is great.

The second main screen within *Mug Shot! Plus* is the drawing screen. A normal assortment of drawing tools is supplied: draw/erase, spray, fill, rectangle, ellipse, polygon, line, and text (X-ray, block, XOR ... 9 sizes ... turn in 90 degree angles). There are six pattern fills plus solid, six brush sizes and two brushes used with the fill pattern, and two levels of zoom. A Rework tool will smooth out the entire mug, eliminating the blocky and rough edges. This tool may also be used to thin out the lines of the mug. A clipboard is also available. This allows the user to create a separate library of parts to load and paste.

Mugs may be printed directly (4 sizes ... printer drivers supplied) or saved to disk (.MUG, .IMG, .PI? formats supported) The documentation states that *Mug Shot! Plus* will run on any ST, either color (medium resolution) or monochrome. It's compatible with big screen monochrome monitors.

For young children, there is a "lock" mode that prevents accidental printing or disk access. It is, indeed, a software program that can be both useful and enjoyable to children and adults. The disk is not copy-protected and may be installed on a hard drive. The documentation is a professionally prepared 20-page booklet.

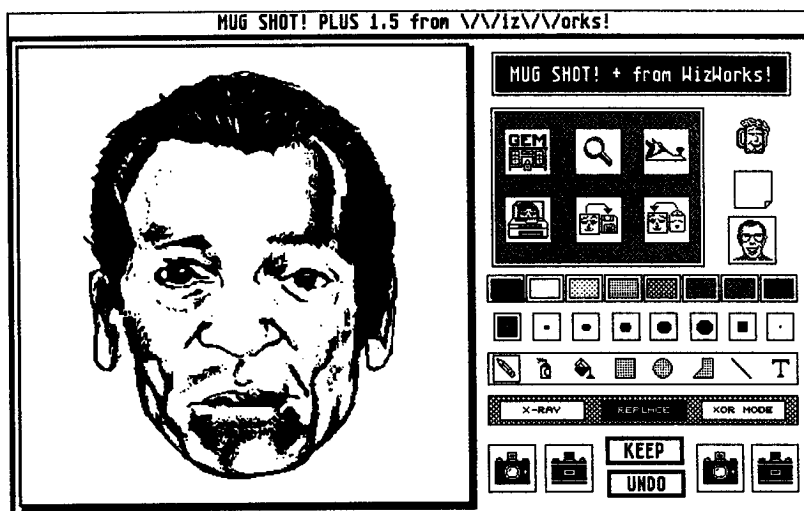
One interesting *Mug Shot* feature is auto-cycle. This may be used to repeat a random selection of parts from the bins and, thereby, create many different faces. Watching the various mugs displayed on the screen is, I suppose, a form of entertainment. It's a bit like "people-watching" at the mall.



A possible criticism of *Mug Shot* is a shortage of female characters and parts. My 10-year-old daughter saw it immediately. While there are some female parts supplied and the drawing tools may be used to create others, it's unfortunate that both of the supplied character files appear to be almost exclusively male. Take a look at the random auto-cycle feature with either file and you'll see what I mean. How many look like women? Perhaps a future data disk will offer something more.

The publisher of *Mug Shot! Plus* uses an interesting variation of user registration, one designed to discourage pirate copies of the program. If the software is purchased from a software dealer, only part of the program is supplied: the mug screen. To obtain the fully functioning software with the drawing tools screen, it's necessary to return the registration card. The latest upgrade and documentation will then be sent. If the software is purchased directly from the publisher, the entire program will be delivered. Each purchased copy can then be identified by the publisher.

Mug Shot! Plus, written by Chet Walters, is fun, flexible, powerful and easy. The historical file may be



used in school reports, although it would have been helpful if the publisher had included part numbers to create some of those well-known characters. Adults may find the software useful in adding illustrations to letters and reports.

Mug Shot! Plus should appeal to a wide range of users, child through adult, with goals from entertainment to business.

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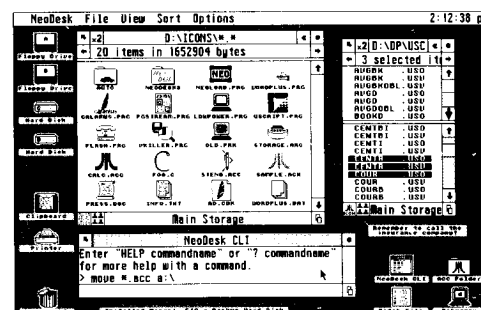
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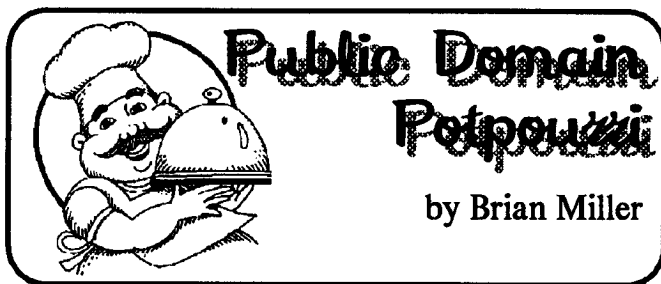
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Demo Programs--An Innovative Form of Advertising?

In the up and down world of Atari, we continue to read mixed signals of progress and setbacks. On one hand, we rejoice that Atari has introduced the new line of STE, STE Mega, and TT computers. On the other, we despair in the news of another ST publication facing hard times. *START* magazine has been cut back to 6 issues a year, because of a lack of advertising. [Update: make that 0 issues per year. -JW]

For those of us who scour Atari magazines looking to read about new software or reports of software upgrades, we have had yet another important avenue significantly curtailed. If we have fewer opportunities to learn about software, how can we decide on what programs to buy or pass up?

Fortunately, we have another way to keep on top of what's new. Many products distribute demonstration programs in the same manner as shareware. If the demo is well thought out, you can try out the demo to see whether a program will fill a particular need. You can easily find demonstration programs on many bulletin boards. In fact, the most recent issue of *Livewire* magazine, a bimonthly publication of GENie, gives a fairly long list of the demo programs available in its ST library. *Current Notes* also includes a respectable number of demo programs which you can examine.

GramSlam Demo

For this issue, I decided to look at *GramSlam* created by Phil Comeau, CN library disk #531. [Ed. Note: a newer version of *GramSlam*, V3.2, has replaced the earlier version on #531 since this article was written.] *GramSlam*, as the name suggests, is a grammar and style checker. Spell checking programs catch spelling errors. Most do not give us a clue whether we have adhered to basic rules of grammar, or presented our work in a readable style. As Mr. Comeau states in the accompanying readme file, *GramSlam* "checks documents for incorrect, awkward or wordy phrases."

GramSlam is a fully functioning demo of the commercial product. While many demo programs disable a key feature to encourage you to register your copy, every feature of *GramSlam* works. Unfortunately, every action within the program is preceded with an alert box announcing a 10 second delay. The

alert box reminds the user to mail in the \$15.00 registration fee to eliminate the "annoying" delay.

Annoying is an understatement. The first time I tried *GramSlam*, I angrily quit the program after reading the same alert screen a few times. I gave up well before giving the program a chance to analyze a document for errors. It was only after deciding to write about *GramSlam* that I swallowed my impatience like a bitter pill, and put the program through its paces.

While *GramSlam* does not make use of the typical GEM overhead menu bar, its graphic interface is attractive and well thought out. Each set of options is displayed in an uncluttered box with appropriate instructions. You can use the mouse to point and click on the desired choices. *GramSlam* lets the user choose to send the analysis of a document to the screen, the printer, or to a separate .OUT document. *GramSlam* also lets you configure the dictionary to suit your own needs. As equipped, the program checks for over 1,000 grammatical errors, misused words, and awkward phrases. You can add, delete or modify the words and phrases it looks for with its phrase editor.

The *GramSlam* package includes the standalone program and an accessory version of the product. If installed as an accessory, you can use it from within any GEM program. *GramSlam* works in either medium or high resolution, and it will work on a 520 ST.

The program can read documents saved as ASCII text and will try to read files saved in the formats of most word processors. However, Mr. Comeau warns that the program may become confused by hidden characters and, therefore, miss some phrases.

The report generated by *GramSlam* lists the name of the document and the problem word, with its associated line number, for each suspected error. The report also presents the problem word in the context it was used. A description of the problem and a suggested alternative is included.

GramSlam presents a summary of the document at the end of the analysis. It reports the total number of problem phrases found, as well as the total number of words and sentences in the document. It also counts the instances of "to be" found, which is a good indicator whether you wrote the document using passive or active voice. The final piece of information offered is the Fog Index. The Fog index is computed based on the average length of sentences and the number of polysyllabic words used.

For the nominal cost of the CN disk, you can judge for yourself whether *GramSlam* is right for you. Not only can you try the *GramSlam* demo, but you can also take advantage of the other programs included on the disk. You can also evaluate *GramSlam* by reading the .GSP file. This file stores the rules *GramSlam* uses. By looking through it, you should be able to judge whether the program will catch the kinds of mistakes you are likely to make.

You probably couldn't go too wrong if you decided to forgo the demo and buy *GramSlam* without a test run first. The registration fee is only \$15.00, which is considerably cheaper than most DOS-based grammar checkers. We ST users have few choices anyway.

RightWriter vs. GramSlam

As you are probably aware, style and grammar checkers abound in the IBM world. I thought it would be interesting to pit *GramSlam* against one of the most famous DOS based programs, *RightWriter*.

Below is a sample paragraph that was analyzed by both programs:

Andrew stared across the river still not believing his brother was gone. There was not a hint of a breeze, and the water's surface was as smooth as glass. He could not comprehend how this now gentle and placid waterway could be the same river that had been a murderous torrent just two days before. Its turbulent waters had caused his brother's death. Just as certainly the river had killed part of Andrew, too. He could no longer feel love or compassion towards anyone or anything. Those emotions had been drowned along with his brother. Only hatred, bitterness, and resentment lived. All else was dead.

The analysis provided by *RightWriter* is shown in the box on the right.

RightWriter embeds its comments within the text of the document, though deleted here to save space. It brackets the problem phrases, states the problem and offers suggestions for each problem found. *RightWriter* presents a global summary at the end of the document, according to several factors of style and grammar. It measures the readability of the document according to several indices. *RightWriter* also measures the strength of delivery, and offers suggestions if the delivery can be improved. *RightWriter* analyzes the use of jargon and descriptiveness of the work.

RightWriter uses the Fog and Flesch indices. Both analyze the length of sentences and number of polysyllabic words. However, the Fog index relies more on long words, while the Flesch index flags long sentences. More concise sentences using shorter words will earn a higher readability score. Finally, *RightWriter* lists any words it feels need to be reviewed.

You can set *RightWriter* to analyze a document for different writing styles and audiences, including: the general public, business, and fiction. The program lets you modify its dictionary, and will let you configure it for use with several word processors. It can even be invoked directly from *WordPerfect*.

To correct mistakes, you can refer to the .OUT document and make changes in the original document. You can also make changes in the .OUT document itself, and direct the program to remove comments when you have finished editing your work.

RightWord Analysis:

<<* UI2. WORDY. REPLACE Just as BY as *>>^

<<* SI. PASSIVE VOICE: been drowned *>>^

<<** SUMMARY **>>

Overall critique for: C:\word5\sample.doc

Output document name: C:\word5\sample.OUT

READABILITY INDEX: 5.70

4th	6th	8th	10th	12th	14th
****	***				
SIMPLE	GOOD				COMPLEX

Readers need a 6th grade level of education.
 The Flesch Index for this document is: 74.942
 The Fog Index for this document is: 17.238
 Average Number of Words/Sentence: 11.667

STRENGTH INDEX: 0.81

0.0	0.5	1.0
*****	*****	*****
WEAK		STRONG

The writing has a strong style.

DESCRIPTIVE INDEX: 0.36

0.1	0.5	0.9	1.1
*****	*****	*****	*****
TERSE	NORMAL		WORDY

The use of adjectives and adverbs is normal.

JARGON INDEX: 0.00

SENTENCE STRUCTURE RECOMMENDATIONS:

15. No Recommendations.

<< WORDS TO REVIEW >>

Review this list for negative words (N), jargon (J), colloquial words (C), misused words (M), misspellings (?), or words which your reader may not understand (?).

bitterness(?) 1	compassion(?) 1
dead(N) 1	death(N) 1
hatred(N) 1	killed(N) 1
murderous(J) 1	no(N) 1
not(N) 3	placid(?) 1
resentment(?) 1	torrent(?) 1
towards(?) 1	waterway(?) 1

<< END OF WORDS TO REVIEW LIST >>

<<** END OF SUMMARY **>>

GramSlam Analysis:

GramSlam 20-Sep-90 2.30
Copyright 1989, 1990 by Phil Comeau

C:\GRAMSL23\SAMPLE.DOC line 1:

Problem: that
Context: waterway could be the same river that
Description: Can often be omitted
Suggestion: Consider omitting

C:\GRAMSL23\SAMPLE.DOC line 1:

Problem: its
Context: torrent just two days before. Its
Description: Often confused with "it's"
Suggestion: Its: possessive

C:\GRAMSL23\SAMPLE.DOC line 1:

Problem: anyone
Context: feel love or compassion towards anyone
Description: Often confused with "any one"
Suggestion: Anyone: any person

Finished Checking C:\GRAMSL23\SAMPLE.DOC

Problem Phrases Encountered:	3
Problem Phrases Reported:	3
Number of Words:	104
Number of Sentences:	8
Average Sentence Length:	13 words
Occurrences of Verb "To Be":	7
% Sentences Containing "To Be":	87%
Readability Grade (Fog Index):	08.7

This was produced by The GramSlam Grammar Checker. To obtain a registered copy (which doesn't have the delays), send \$15.00 + \$2.00 S/H to: Phil Comeau Software, 43 Ruelter St., Nepean, Ontario, Canada K2J 3Z9

I tested *RightWriter* using *pc ditto*. It worked, though very slowly. While it took only a few seconds for *RightWriter* to analyze the sample paragraph using a 286 machine, it took close to five minutes for *RightWriter* to finish using *pc ditto*.

GramSlam doesn't embed comments within the document. Rather, it presents a listing of each problem it finds, and its line number, in the document. Including the line number is a nice touch for those of us who use word processors which provide screen coordinates. Otherwise, you will have to count the lines by hand to find the potential problems. *GramSlam* looks for commonly misused words and automatically flags each occasion of their use. It does not evaluate whether the word has been used appropriately. For example, it flagged the words "its" and "that" and "anyone." It pointed out how these words are often misused even though each had been used correctly. *GramSlam* as-

signs a readability grade based on the Fog index.

GramSlam lets you customize its dictionary. You can add, delete, or change the rules it works by. You can also direct the program to review a document according to specific grade levels.

From the preceding discussion of the two programs, it is fairly obvious that *RightWriter* is a more comprehensive program. It uses over 4,000 rules to evaluate documents and gives you plenty of feedback about your work. It is also considerably more expensive than *GramSlam*. You will have to spend from \$50.00 to \$55.00 to buy Version 4.0 of *RightWriter*.

In contrast, the current version of *GramSlam* uses approximately 1,200 rules on which to base its analysis. It does not evaluate whether you use a rule correctly, but automatically flags the use of certain words and phrases. *GramSlam's* registration fee is less than a third the cost of *RightWriter*. Mr. Comeau has demonstrated a commitment to improving *GramSlam*. The text file provides an impressive chronology of product revisions. Indeed, a version 3 demo is now available through Compuserve. Even if the program only comes close to meeting your needs today, chances are it will be improved even further in the future.

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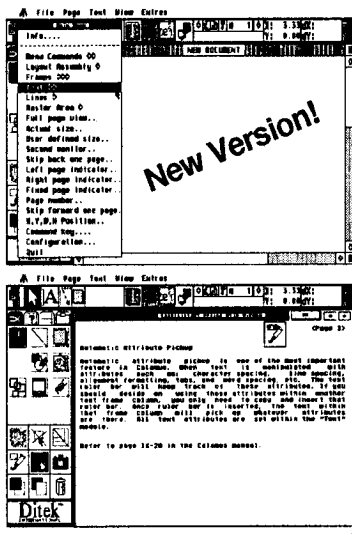


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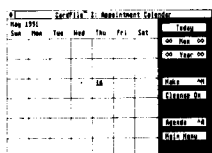
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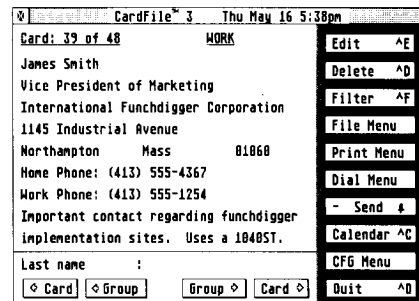


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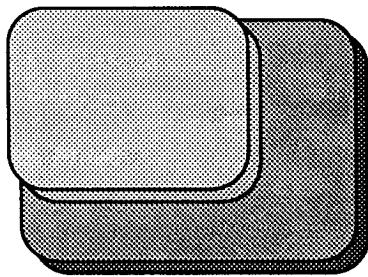
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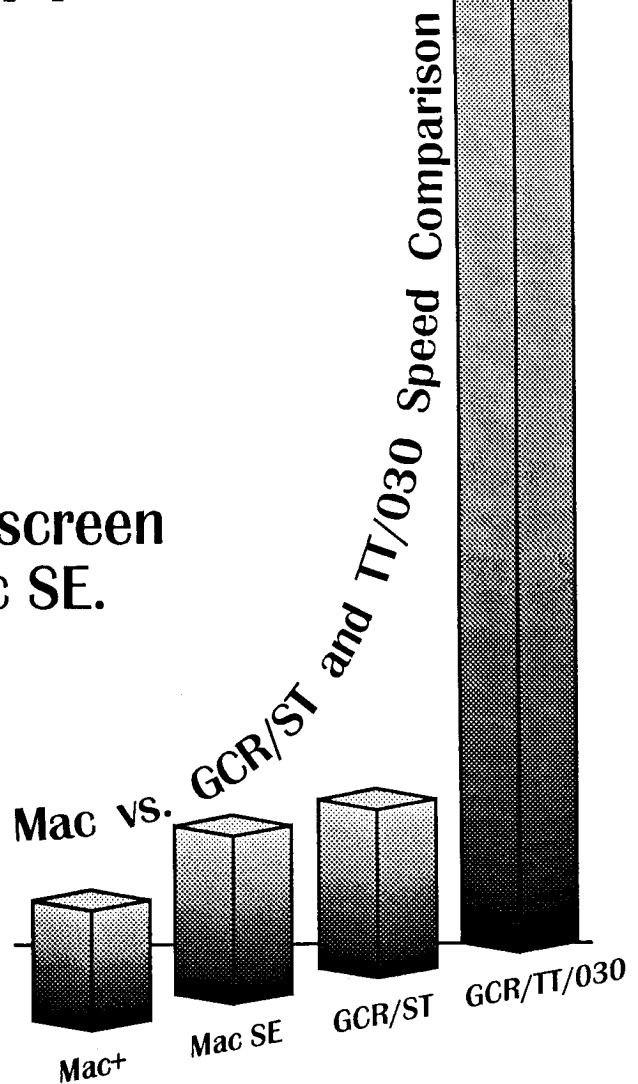


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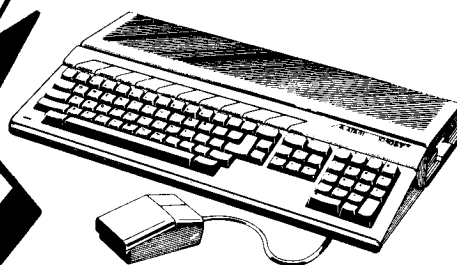
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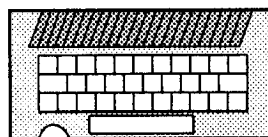
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DOS Inventory

for the Atari 8-Bits

by Charles Cole

OK, 800/XL/XE sports fans, let's take an inventory of DOS's for the Atari 8-bit computers!

First, I guess there must have been an Atari *DOS 1.0*, although I don't have a copy of it and know of no one who uses it. I bought my first Atari computer, an 800 with an 810 disk drive, in 1980. Atari *DOS 2.0* was already being shipped then. I've seen references to an Atari *DOS 1.0* in some of the earlier computer magazines devoted to Atari coverage, recommending that people convert to 2.0.

Atari *DOS 2.0*, dated 1980 and programmed, I believe, by Bill Wilkinson, became the defacto standard among Atari users. It's still in widespread use by people who haven't upgraded from the model 810 single-density drives and is frequently encountered on disks of PD software where it is still used as a software distribution medium. User-friendly, a bit sluggish, but always dependable, *DOS 2.0* is the "plain vanilla" of Atari 8-bit DOSs.

Atari *DOS 2.5*, released with the model 1050 disk drives in 1985, was basically just *DOS 2.0* with the added Atari Enhanced Density mode. Owners of 1050s who have not upgraded them with ICD's US Doubler still use this DOS, I suppose. I even have a few commercial programs that used *DOS 2.5* in order to take advantage of the additional disk capacity it offered. I never did own a 1050 drive, so I can't say much about this one from personal experience. My 1050-owning friends who have used it are not overly enthusiastic about its merits. Most of them have switched to *MyDOS* or *SpartaDOS*, and installed US Doublers.

Atari *DOS 3.0*, was released in 1983. Why did we have 3.0 released 2 years before 2.5? Only Atari knows the answer to that one! This is a very obscure DOS, and I don't remember anyone ever using it. I never even attempted it. *DOS 3.0* was shipped with early versions of the 1050 drive and was incompatible with both *DOS 2.0* and *DOS 2.5* causing major headaches for software distributors and users alike, which is why it fizzled so quickly. *DOS 2.5* is supplied with a utility that allows you to convert *DOS 3* files to the more compatible *DOS 2.0/2.5* format.

Atari *DOS 4.0*, dated 1984, is also dubbed *Q-DOS*. Programmed by Michael Barall, this one offered on-screen help instead of a written manual, but was trashed by Atari before its scheduled official release. *ANTIC* Magazine bought it and sold it through their software library, more as a novelty item than a usable DOS, I suppose. I bought it from them but have never used it. It was too incompatible with 2.0 and 2.5, and

offered nothing out of the ordinary except taking an inordinately long time to load.

Release 4.4 of *SuperDOS*, by Paul Nicholls, was written in Australia and sold in the U.S. as a multi-density DOS offering single, enhanced, and double density, but only in single sided format. Another density setting, marked "X," was supposed to format any size RAMdisk. Despite the advertising claims when this hit the U.S. a few years ago, I never could get it to format my XF551 drive in double density, or even boot on the XF551. Now I think my copy has gone bad from disuse, because when I pulled it out to test it for this article, all I get is Boot Error, Boot Error.... Never fear! This one has an upgrade policy, if I recall correctly. But where is the company that sold it?

I have several versions of *Happy Warp DOS*, but I don't think you can really classify this as a true DOS. They just wrote a module that would modify Atari *DOS 2.0* so it would run on their drives. I acquired these over the years through upgrades to my two Happy-modified 810 drives, with the last version being 7.0, dated 1986. I think they abandoned Atari right after that release.

Remember *TopDOS*, released in 1985 and programmed by R. K. Bennett? Neither did I, but I found a copy of it. I fiddled around with it a couple of days way back then, before deciding that it offered nothing special and relegating it to dust collecting duties.

Optimized Systems Software (OSS, now distributed by ICD, Inc.) released several versions of DOS for Atari 8-bits, including *OSA+* (1982) and *DOS XL 2.30* (1983). *DOS XL* was packaged with the Indus GT disk drives. It worked well on them but was really hard on a non-Indus drive. I gave up on it primarily because of the way it made Atari drives grind and work so hard trying to read it.

Another one of those DOSs packaged with non-Atari drives was *SmartDOS* (1984), by John Chenoweth and Ron Bieber. Rana Systems provided this one with their drives. It offered multiple densities, but other than that was nothing spectacular.

MachDOS (1985), by Stace. Is Stace a person, or a company? This was basically a modified Atari *DOS 2.0* which provided RAMdisk boot modules for any size RAMdisk you might want to format. When I first modified my old Atari 800 with a 256K RAMdisk, a users group in Nevada provided *MachDOS* and some RAMdisk programs with their upgrade plans. A 130XE version (3.7) is also available for people who have installed RAMdisks. This DOS was way ahead of its time when it was released, but has been overtaken by *MyDOS* and *SpartaDOS*. It is still very usable, since it can be customized to fit your specific hardware configuration.

Here's a strange one called *LJK DOS*. This was the DOS used by the company of the same name, located in Manchester, Missouri, that marketed *Letter*

Perfect, *Spell Perfect*, and *Data Perfect*. *Data Perfect* was a really great database program that could work with 80-column screen adapters, and even format a disk in double density, for those who could afford double density drives in the early 1980s. *Data Perfect* is still being sold, but you need a copy of *LJK Utilities* in order to do much with their DOS.

Long John Silver's DOS 2.6f, dated 1984, also became known as *BlackDOS* because of its screen colors. Another *DOS 2.0* clone that was way ahead of its time. This one offers a disk drive speed check routine, primarily for 810 drives, which can be adjusted; a sector copier, hex/decimal conversions, and a sector diagnosis routine. This is still one of my favorites when I have to revert to 2.0 format, because I like its sector copy routine. Using dual drives, you can copy a disk much faster than with any Atari DOS. This one is still available from public domain software dealers (AKA Twilight Sources).

Atari DOS XE, dated 1988, marketed by Atari. I believe Bill Wilkinson, who wrote the original *Atari DOS 2.0*, did this one for them. It was developed to be packaged with their XF551 disk drives. Unless you are just starting out, this DOS is useless because it is totally incompatible with all previous DOSs, and I don't think any other DOS can read its format, either. Why

does Atari do things like this to us? (Ron Peters expressed similar sentiments when he reviewed *DOS XE* in the June 1990 *CN* - Ed.)

Then there's *CrazyDOS*, written by Chris Crawford, who gave us *Caverns of Mars*, *Excalibur*, and *Eastern Front*. As the name implies, this is not a usable DOS, but is strictly for fun. If you haven't seen this one, you're really missing something. Each of the normal *Atari DOS 2.0* functions has been changed to do strange things to your computer (but nothing permanent or harmful). One example: when you hit option "B" for RUN CARTRIDGE, the word CARTRIDGE sprouts legs and runs across the bottom of your screen.

That leaves us with the two most usable and popular 8-bit DOSs ever--*MyDOS 4.50*, recently released into the public domain by Bob Puff, and the many flavors of *SpartaDOS*. I'll discuss these in more detail in a future article, because they are unquestionably the most powerful and useful DOSs available to any Atari 8-bit owner.

Have I missed any? Undoubtedly, I have! I know I certainly don't own every DOS that was ever written for the Atari 8-bit computers. In fact, I doubt any other computer brand has ever had as many different DOSs written for it!

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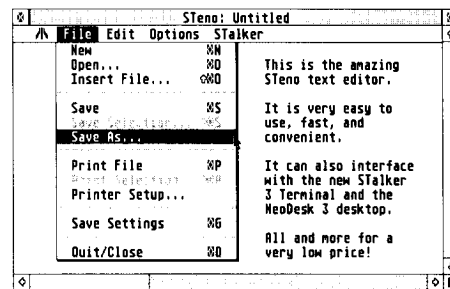
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Ecologist

and

Fractals

Reviews by Jerry Girard

Ecologist

Intended "to help students understand the interactions among different organisms and their environment." Bresnik's *Ecologist* definitely provides a quality environmental learning experience. Disguised as a videogame, the program places you in charge of sending down from your space stationed ark various species to create an ecosystem similar to Earth. A Help function is provided to enable the user to understand the various functions of the specific organisms.

Overall, I enjoyed *Ecologist*. Accomplishing its goal, the program becomes a learning tool that is fun. *Ecologist* not only reports on data, but shows you graphics of your planet's progress. The screens and graphics are in color, so a lot is lost if you use a monochromatic monitor. Other than that, the graphics were pleasing and well-defined. Also, after many hours of play, the program continued to run flawlessly with no bugs or crashes. Of course, this program would be extremely useful in an ecology class, but it also fulfills a hidden "creator" fantasy in all of us.

Documentation files are provided on the disk. The instructions were complete and well organized, including the theory behind the program, some hints on game play, and suggestions for enrichment activities. And fear not for your printer, for *Ecologist's* documentation is easy to access. Simply go to DOS, select option "J" and "copy" from "ECOLOGN.DOC" to "P:" (the printer). You can also obtain a copy from *AtariWriter* by loading "ECOLOGN.TXT."

Don't worry about those key press errors, either. The instructions tell you how to recover. In fact, you don't have to worry about anything, except your planet! This program builds interest and excitement as the screen, colors, and data change. It held my attention and challenged me at a level that felt just about right. It didn't bite, either. *Ecologist* is user-friendly, requiring little effort and preparation to set up. Just pop it in and go (actual loading procedure is given in the instructions). For me, the only real difficulty was in winning the game. I finally did it with an environmental quality index of 91.5% and an elapsed time of 330 million years.

I ran *Ecologist* on an Atari 130XE with DOS 2.5 and an Atari XF551 disk drive, but according to the docs it's compatible with the Atari 800XL computer and 1050 disk drive. Without a starship you might not be able to "boldly go where no man has gone before," but with *Ecologist* you can certainly create and learn as no man has done before.

Fractals

Bresnik's *Fractals and Other Graphics* is composed of a variety of programs. Included are: The Hilbert Curve (adapted from Michael Ackerman's article in *Byte*, June 1986), The Mandelbrot Set, The Sierpinski Curve, The Dragon Curve, TruchetTiles, Not-So-Slow-Grow, Life, and other graphic programs.

Instructions are only provided for Life and Not-So-Slow-Grow. The user must be familiar with the other programs because on-screen help is poor. However, the limited instructions provided are clear. Life graphs "the manner in which a cellular automaton--a machine which functions independently, operating on the information in its vicinity--survives, reproduces or dies depending on the number of immediate neighbors." The instructions contain the rules, the program, and examples of cell outcomes. The routine itself works fine and might be a good tool for modeling cell growth.

The instructions for Not-So-Slow-Grow outline the program's objectives and detail the workings of the BASIC program but are a little wordy. For example: Not-So-Slow-Grow is "a model of diffusion-limited aggregation, ... the gradual accretion of material on the periphery of a figure." Say what? Fortunately, it gives an example: a crystal of "zinc metal that grows on the negative electrode in a shallow plating tank." The program's function is to graph these figures. It does a moderate job.

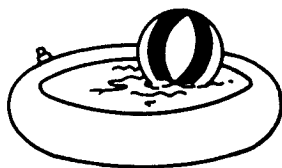
Even with the documentation provided, I did not feel the program lived up to its potential. I'd give it a "C." No mention of the individual program's functions was given. Its organization, as to the graphic programs, required you to run each program to figure out what it was even related to. You could not easily escape from an error in these programs; you had to press [BREAK] or [RESET] and then run the program over again.

However, no bugs were found and Life, Not-So-Slow-Grow, and Chaos (a program that graphs snowflakes) did hold my interest. Such instructions as were provided proved to be useful and accurate; color and resolution of the graphics displays were also satisfactory. I ran Fractals on my Atari 130XE with DOS 2.5 and an XF551 drive.

Available from: Bresnik Software, 555 Ware St., Mansfield, MA 02048. Shareware, all disks \$5.95 + \$2.00 P&H per order.

[Editor's Comment: I took a brief glance at Fractals and found it difficult to personally relate to the

subject matter. I'm generally in agreement with Mr. Girard's criticisms: a major weakness of this program is its lack of educational background material. However, while this month's 8-bit articles were in the editing phase, an article in a technical journal completely changed my attitude toward both the subject of fractals and my frustrations with Bresnik's program. The April 22, 1991 issue of Chemical & Engineering News (a weekly news publication of the American Chemical Society) featured fractals on the front cover and a 6-page in depth article (p.28) by Stu Borman titled "Fractals Offer Mathematical Tool for Study of Complex Chemical Systems." This article gave an excellent general background on fractal geometry and featured some especially informative (and breathtaking) pictures of fractal patterns compared to their real-life models. If your local library doesn't receive this journal or can't obtain a copy of the article via interlibrary loan, try contacting the Microforms and Back Issues Office, American Chemical Society, 1155 Sixteenth St. NW, Washington, DC 20036. - BLP]



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Stuck in a Rut

by Sam Wright

I've never been a fan of role-playing games (RPGs), which is why "Stuck in a Rut" has steered clear of them all this time. I could never see the appeal of games like *Dungeons and Dragons*, mostly because of the numbers and statistics you had to keep track of (not to mention the equipment needed: multi-sided dice, paper, figures, pencils, the game booklets... hey, all these were major expenses when your sole source of income was an allowance!). The vast amounts of time spent setting up the game were incredible. I could be doing more productive things, like, er, watching TV.

All this was eliminated when RPGs were translated for computers (the *Ultima* and *Wizardry* series, for example). I was still disinterested, though; RPGs, despite being faster and easier when the computer did the work, were still complicated. Not only that, but computer RPGs pretty much forced you to play alone. Part of the fun of board game RPGs was being in a

group, working together to defeat that nine-headed radioactive newt.

In RPGs, death is always around the corner (usually occurring in unmapped mazes—I hate mazes). You have to fight to stay alive. Arcade sequences with you fighting evil creatures exist for the purpose of embarrassing yourself in front of others (if only I had the agility to press that joystick button just a *little* faster...). RPGs contain lots of fighting and killing and not as much thinking or puzzle-solving as standard adventure games. I wanted puzzles. I liked being placed in a situation without knowing what to do, where I'm rewarded more for thinking with my mind than with my fists. The standard adventures were more true to life.

RPGs also scared me, much the same way taxes and big, juicy, unidentifiable insects do. I couldn't handle creating a character or group of characters all by myself. Imagine being one intelligence point away from not realizing the fourth stair on the sixth level of a

Quest for Glory I

So You Want to Be a Hero

dungeon was wired to explode a nuclear bomb, causing a chain reaction, leading to the end of the world(s) as we know it today! The pressure! I would much rather have a character created for me, one where everyone playing the same person has an equal chance of blowing up the world.

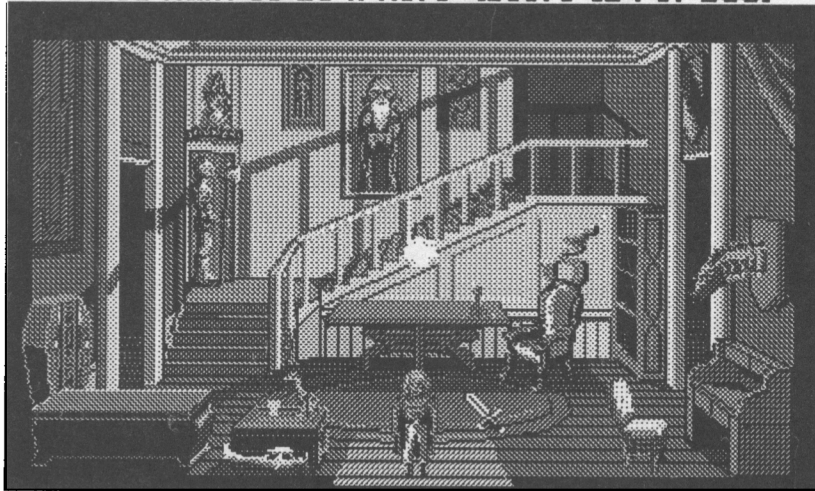
Well, okay, creating characters didn't bother me *that* much; it was, after all, a *role-playing* game. But what consistently overwhelmed me was deciding what points to allocate to what abilities. I had no idea.

That's why I took an instant liking to *Zork* and its type of adventure gaming. You played the role of a regular guy. The character was kept generic enough so that anyone could relate to it. And there was never any confusion as to how many points to allot to certain skills of yours. How do I know how agile I want to be, how much stamina I should have? *Beyond Zork*, the final chronological episode in the five-part series, was an excellent game. It painlessly incorporated elements of role-playing into the standard text adventure (it even mapped territory for you!) by setting up ready-made characters. Because of this, I never considered *Beyond Zork* an RPG.

Very much like *Beyond Zork* in the merging of standard adventure and RPG is Sierra's *Quest for Glory I: So You Want to Be a Hero* (QGI). Formerly titled *Hero's Quest I*, QGI is an animated adventure (like Sierra's other excellent adventures) with role-playing elements thrown in: arcade-action fighting and character creation.

Although I had my doubts, the combination works quite success-

So You Want To Be A Hero [score 124 of 500]



At the wizard's pad, where nothing is as it seems.

fully. After selecting a character and distributing skill points, my prejudices for RPGs vanished. I became obsessed with increasing my strength, vitality, and lock-picking skills. After a few more minutes, I was hooked. If this is the state of RPGs today, I will turn off the TV and play them more often!

In *QGI*, the town of Spielberg is in desperate need of a hero. Elsa and Barnard, the baron's kids, have been kidnapped (the depressed baron assumes the worst, and has since become a loner). No one can walk out at night without being accosted by either a monster or one of the many brigands hanging around. Even daytime isn't safe anymore. And, by the way, the evil witch Baba Yaga has cast a curse on the entire village.

That's where you come in. You play the role of the hero, fresh from the Famous Adventurer's Correspondence School (FACS). Or rather, you're a striving hero, a hero wannabe. The humorous handbook included with *QGI* gets you well on your way, defining heroes and pointing out friends and foes you may run into. The handbook's also useful for tips on fighting (if you're a fighter), casting spells (if you're a magic user), and finding the thieves' guild (if you're a thief). The FACS handbook will be a constant source of information throughout your travels.

Located in the Adventurer's Guild (every town has one) is information pertaining to proving your worthiness as a hero. Just sign the log book, answer a want ad, and you're all set.

QGI offers a choice of three characters to play: fighter, magic user, or thief. Playing *QGI* as each will present you with a unique outlook on the game. Because each character is a different person, each has a different way of solving puzzles; hence, each game is played differently. For example, the magic user is more adept at dealing with enemies through magic. The thief can throw daggers or sneak right



The Adventurer's Guild: the employment agency for would-be heroes.

past his enemies. The fighter, true to his name, simply pounds the living daylight out of them.

Naturally, I chose the fighter as my first character. Replaying as the thief and magic user, however, opened up a new set of challenges. As a fighter I didn't have lock-picking skills. As a thief, I did and was able to break into houses and fence the stolen merchandise at the Thieves' Guild--certainly a lot easier than earning silvers through hard labor. There's something to be said about hard labor, though. While moral and ethical, working also builds up your strength points.

You'll find yourself spending the first few days (*QGI* time) exercising and practicing to increase skills. Goblins are good monsters to begin fighting, and there are plenty of them. They're easy to kill (they start the fights and aim to kill you, so killing them is justified), they build up your fighting points, and you can search their bodies for treasure afterwards.

After rescuing Spielberg from Baba Yaga's curse, you become a hero and are rightfully honored in a satisfying conclusion. Your character can then be saved for later play in *QGI*'s sequel, *Quest for Glory II: Trial By Fire*. In a way, *QGI* is only practice, leading up to your real challenge.

QGI uses the same interaction as other Sierra animated adven-

tures. Your character is on the screen, and you move him around with the keyboard or mouse. The 3-D scenes are static, but you can interact with most everything in the room while being entertained by the witty animation, from the warlock's funhouse to the impatient tapping of Crusher's foot. The graphics and animation are some of the best Sierra has put out yet.

Also consistent with other Sierra animated adventures is the computer's slow response. The more scenes become complex (the more things that move on the screen), the slower your character becomes. In *Erana's Peace* (aside from the fairies, one of the most enchanting experiences in the game), everything slows down to a crawl. In other rooms, I always had my character running, just to save time. The loading of new screens (even after it has loaded into memory) when switching rooms, as well as responses to text commands, can also seem eternal.

This was especially evident in the arcade fighting sequences. Besides being painfully slow, I could never figure out strategies with dealing with various monsters, regardless of the amount of fighting points I had.

Other than the speed of the game (which is probably more the fault of the speed of the computer), *QGI* is a wealth of entertainment.

Husband-and-wife design team Lori and Corey Cole put out a commendable introduction to the *QG* series (there will be four altogether), and I'm eagerly looking forward to the sequels.

Quest for Glory I: So You Want to Be a Hero (\$59.95), from Sierra, runs on all Atari STs and comes on four double-sided disks. It is not copy protected in any way (even more reason to buy it) and can be run from a hard drive, costing you close to 2.6 megabytes of space, not including saved games. You can save as many games as space allows, with each saved game weighing in at around 42K. Version 1.137 was reviewed.

Because *QGI* is non-linear, it's possible to finish the game without earning the full 500 points. Short of dying, it's also possible to finish without ever becoming an ultimate hero (lifting the curse). In doing so, however, you rob yourself of several entertaining puzzles. There are multiple solutions to most puzzles: think of how your character would deal with the situation and act on it. Use each character's skills to his advantage.

QGI is also pretty straightforward (I'm assuming the sequels will get progressively harder). If you think about it long enough, and if explore and ask many questions, you'll eventually find the answer. The many solutions to the puzzles make the game even easier.

Following are some general comments, sorted by topic:

Characters. Ask questions. You know you've been plopped into the land of Spielburg to be a hero, but a hero of what? Asking characters about other characters will result in your finding out a little more of what's going on (for example, the town-wide curse and the person responsible for it is something on everyone's mind). All the pieces will soon fall together. And, you'll get extra points for certain questions. All the interaction that's required is

"Ask about...."

Some characters only come out at certain times of the day. This makes sense, in that most characters would eventually want to get some sleep (besides the folks in the tavern, who make a living out of drinking). Except for the appearances of your enemies (and even they can be expected to hang out in certain places at certain times--check your FACS handbook), characters' appearances are not random. If someone was there yesterday and isn't there today, check the time (read under "locations" for more information). You may have missed him or it may not be time for him to show up yet.

Locations. Time passes constantly, even if you stand still. However, if you do stand still, you won't be able to tell unless you check the time or start getting tired or hungry. Certainly the background shows no indication of the sun setting or rising ... unless you move to another location. As long as you

stay in one spot, everything in the "room" will stay the same. Therefore, if you're waiting for the appearance of someone, he'll never show up unless you keep moving between screens.

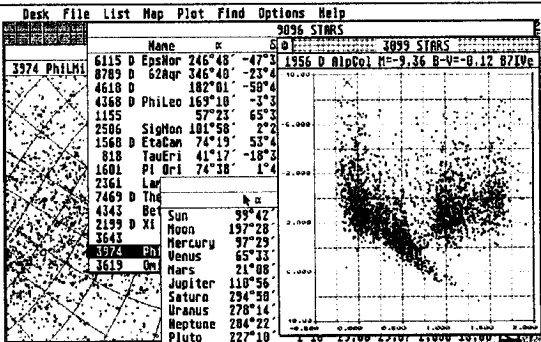
As usual, "look" at everything. Room descriptions don't always appear when you first enter, so looking around might highlight exits and manipulatable objects.

Objects. Besides the stated objects, also consider the ones that aren't mentioned in the text. These objects are especially helpful where you can't climb (remember that there are alternate solutions for most puzzles). Don't get thrown by the fact that they aren't shown in the scenery.

Situations. Death is a learning experience. Being killed is not always a bad thing, as long as you've saved the game right before. You may get additional information as to how you could have avoided the situation. At the very least, you'll get to moan at the bad puns.

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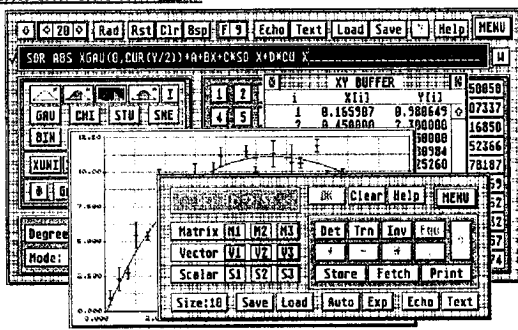
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A History of the Atari ST

Part I: The Early Years, 1984-1987

by Bill Yerger

In the Beginning

In 1984 Jack Tramiel announced the imminent release of the Atari 520 ST, also known humorously as the "Jackintosh." The actual release took place in 1985. Early models were seen in March of 1985, two months after the machine was shown at Winter CES in Las Vegas. In the March edition of *Atari Explorer* Jack was quoted as promising a CDROM for the 520 ST which would be out in a few months. Sig Hartmann promised to push the envelope of computer capabilities with the 520 ST and its antecedents.

The groundwork had been done in '84 and '85 by a team of developers consisting of Atari and Digital Research personnel, marrying GEM from the MS-DOS world with the Motorola 68000 architecture. The latter was chosen by Atari to produce a Mac-like operating system, originally developed by Xerox at the Palo Alto Research Center. Atari developed its own version of GEM, which is integral to the ST/TT operating system, in Palo Alto under the supervision of Leonard Tramiel.

Although the ST was released officially on September 19th of 1985, there was no software to speak of, until December. The hardware was considered a true price breakthrough. It offered more for the money than anything on the market at that time. The original suggested list price was \$1000 for a color system with single sided drive and \$800 for a monochrome system. No hard drives were available. In fact, the only option at that time was the SF314 double sided drive. Marketing was handled through rep companies.

Due to the sudden decline of CPM in 1984 and the dominance of IBM in the computer marketplace at the time, it was difficult for Atari to make any real headway in the market, but the price performance ratio gained the computer a moderately large cult following. At the time, a 520 ST with TOS in ROM cost about \$675, street price, including a mono monitor. This compared favorably with a \$2,500 Fat Mac or a Mac Plus for \$3,000, as well as the IBM AT for about \$3,000.

The first software of any consequence to hit the market was *HabaWriter* from Haba Arrays of Van Nuys, California. Prior to that, the only word processor available was *ST Writer*, a quickly thrown-together clone of *AtariWriter Plus* from the Atari 800, an 8-bit 6502 chip machine from the early eighties.

Before *HabaWriter* could get much of a market share, Atari obtained *First Word 14* from GST in Cambridge, England, and *DB-One* from Stoneware in San Francisco and bundled these two with *Basic*, *Logo*, and *Neochrome .5*, for their Christmas '85 promo. Batteries Included from Canada came out shortly thereafter with *DEGAS*, a good art program by Tom Hudson; Infocom had about five games out on the ST; Hippo had a few utilities on the market and Shanner had a third party drive as well as a Lotus compatible spreadsheet, *VIP Professional*, (currently marketed by ISD in Canada), and the *ColorWriter* word processor.

With about 500 dealers, Atari was on its way up by March of '86 when the Atari 1040ST, with one megabyte of RAM and a double-sided drive, was released. It was two months late, which caused much grumbling, but that turned out to be the closest Atari has come to meeting a release date thus far. Soon thereafter, Atari released the SH204 20-meg hard drive for \$799 list, or about \$600 less than comparable Mac drives.

Six Magazines & Software

In this first year of the ST, periodical support consisted of:

- Atari's official magazine, the *Atari Explorer*, which never has been very newsworthy or topical;
- *ST Applications*, which was a rough paper magazine with fair articles;
- *Analog*, which had been an Atari 8-bit magazine; and
- *Antic*, which was an 8-bit magazine with an ST section.

Soon to follow were *Compute ST* and then *STart*, which was an offspring of *Antic's* ST section. *Analog* gave birth to *STLog*.

Mark of the Unicorn also produced an excellent word processor, *The Final Word*. They made several mistakes in its conception, however. First, they ignored the ST's graphic interface and instead made a direct port of EMACS from mainframe and CPM. Secondly, *Final Word* was copy protected. These two factors made it too tedious for most users. Mark of the Unicorn, disappointed with their sales, left the ST market for good.

The biggest names in software for the ST in this early period were Michtron, a company which had be-

gun with programs on the Sanyo, and whose owner, Gordon Monnier, had taken a liking to the ST and thought it had a good chance of evolving into a nice niche market; Shanner who sold drives, a color printer, and *VIP Professional*; Batteries Included who made *Thunder*, an excellent spell checking accessory; *Isgur Stock Portfolio* from Lee Isgur, and Tom Hudson's *DEGAS* soon followed by the improved *DEGAS Elite*, which took more advantage of the 1040's additional memory (1024k); Haba, which also made a *Home Accountant* program; and Hippo, who seemed to hold the most promise at the time.

The one thing really lacking on the ST was a WYSIWYG graphic and font type program ala *MacWrite* or *Microsoft Word*, but Hippo promised *Hippo Word*. *Hippo Word* looked like it might fill the bill, but due to production difficulties it made it into the market with too little financial backing. It failed to gain market share rapidly enough to survive and went out of business.

A Thousand Plus U.S. Atari Dealers

Many critics thought this might happen to Atari also. Instead, as it has turned out, these were Atari's best times. In March of '86, with the advent of the 1040, Atari instituted an educational discount backed up by a 7% kickback from Atari to the dealer on submission of proof of educational status for the customer. At my dealership I would have one or two people waiting to pick up their 1040's when I got back from the weekly drive down to Atari to pick up machines, throughout the latter two thirds of 1986. Dealers also had a 3% co-op advertising fund that was taken off the price of machines and a 3% repair fee paid the same way. Altogether this meant a machine at thirty per cent off of list to a dealer ended up costing about 58% of list after rebates to the dealer. I sold ours at 22% off to students and spent 3% advertising or more. Our sales were rapid, as I have said. There was no specific rule against mail order and, in fact, Atari had sponsored a mail order ad by JSR Sales on page 1 of *Playboy* in January 1986, so I opened a mail order company to sell software and ST hardware to folks who were too far from dealers. By the end of '86 there were over 1,100 dealerships. Atari was still growing when it went public in November of 1986.

During '86 though, Atari initiated changes in an attempt to make their line more profitable. First to go were the rep firms for California. This didn't seem to matter much at the time. Larry Samuels was heading up the sales division at Atari. He had come from a Utah student-bookstore, computer-sales department to Atari and maintained balance in a position which no one has held as long as he did since then.

Towards the end of '86, Deren Kazmier and Shawn Fogel released *Publishing Partner*, the first real desktop publishing program for the ST. Two previous

efforts, *Easy Draw* by Migraph and *The Graphic Artist* from Progressive Computer Applications, had inferior output and poor user interfaces. *Publishing Partner* was intuitive, WYSIWYG for the most part, and wonder of wonders, it had postscript output and worked with industry standard laser printers. About the same time, David Small finished the *Magic Sac*, the world's first Macintosh emulator.

Stars Were Shining for Atari

By the end of 1986 the future looked rosy for Atari. Christmas sales at my store were brisk, indeed. Our best selling game was *Time Bandits*, and there was far more application software for the Atari ST than the Commodore Amiga. Timeworks had released a series of programs such as *WordWriter*, *SwiftCalc*, and *DataManager*. Charlie Tseng had *DBMan*, a DBase 2/3 clone on the market. In November 1986, Atari U.S. Corporation went public with an initial stock offering at \$11 per share.

Antic magazine's *Start*, changed from a quarterly to a monthly magazine and their software line was rapidly growing with *Cad 3D* becoming more and more accepted as a serious low-end modeling program. Antic would follow this with *Phasar*, a home accounting program and *Cad 3D 2.0* which would engender support programs such as *CyberPaint* and *Sculpt*, and become a fairly competent animation system. Two new tabloid magazines leapt into the fray vying for ST users' affections. Rod MacDonald started *ST Informer* in Grant's Pass, Oregon. *ST Informer* was topical and fairly well written but usually was overly upbeat. To this day, it's as well known for being an "apologist" one-sided tabloid, as it is for delivering the news. *STWorld* was started by Rich Tzukii, and usually had good headlines but was rather sparse reading inside. Rich would later turn his talents to promoting Atari shows.

A Most Respectable Showing

Winter CES, January '87, was Atari's first show since going public. The stock was rising well. Atari made a surprising showing at CES with a corporate looking crew of notables such as John Skruch, Carol Stanton, Neil Harris, and Richard Frick. This was buttressed with appearances by the "Father of the Company" Jack Tramiel, the miracle worker, as well as Sam, Leonard, and Garry, Jack's offspring. On display were ST's running dozens of applications, including Deren Kazmier's just released *Publishing Partner*, which was being marketed by Shawn Fogel, present in his own booth in the East Hall. By this time, ST's had hard drives at half Apple's price, and the ball seemed like it was really rolling. The stock had risen to 22 from an opening of 11 and soon went to 32 before splitting. There were 1186 dealers on the rolls and distribution channels were flowing with product.

However, the show was not without items of concern about the inner workings at Atari. Neil Harris announced that dealers would be paying higher prices than discount stores for the PC1 and the 520. He also said Toys-'R-Us and K-Mart would begin selling the PC1 and the 520. The showing of the PC1 was considered a questionable move by several dealers. This was an IBM compatible PC with GEM and a mouse included. It was never released on the American market.

Also shown were the Mega and Megafile hard disk. These were very attractive items and generated a high degree of interest. However, it was to be more than ten months before they were released. Some estimate Atari lost as many as 50,000 or more 1040 sales while potential consumers waited for the new product.

On the plus side, Atari was attracting some very able developers. *Drafix* was now available for the ST; *Cornerman*, a *Sidekick* clone was released by Michtron. *SBT* was ported to the ST as a good, capable accounting program. In fact, there were close to a thousand ST products on, or coming to, the market. Users pointed with pride toward this number, noting Apple had not been able to get so many out so fast when they began. The future looked fairly rosy.

The First Rebuff for Dealers

Around March of '87 Sam Tramiel was made president of the Atari Corporation. He and Augie Ligouri,

comptroller, began looking for ways to cut expenses and raise Atari's reputation at the same time. To put it succinctly, Atari seemed to lack any vision or overview of the market and the future. The new plan for selling at lower prices to larger purchasers was one of the first slaps in the face for Atari's dealers. This meant that the mail order suppliers, like Almo, who had a flawed reputation in the industry, would get the best price breaks. It meant that the small dealers, who were able to offer support for the product they sold, who had been so carefully selected by the rep firms, would not be able to compete with the no-support "box pushers." As if to emphasize this, Fry's was made a full support dealer, while regular dealers' were told they must stop doing mail order. To cap it off, in March of '87, Atari canceled educational discounts through dealers. This was an unfortunate, since it cleared the way for Apple to take over that part of the market. Also in March of 1987, a new plan, formulated by Larry Samuels, Augie Ligouri, and Sam Tramiel was launched. Its intent was to clean out the dealer channel and squelch mail order. All American distributors were canceled in June of that year. The word was that Atari could better control its distribution without distributors, who were more interested in turning over machines than in producing resellers/dealers who would support the product.

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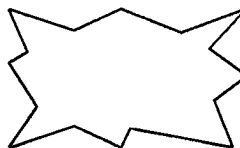
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That summer, dealers began to feel a shortage of available product. For months SC1224 color monitors were not available. The most sought-after product was the Mega ST and its laser printer, but these were unavailable. They had failed to pass FCC Class "B" standards (or home use). This was a problem that was to plague Atari from then on, and further curtail its penetration of the U.S. market. Augie Ligouri wrote a letter stating that there would be no more mail order, and dealers were told it meant cancellation of their dealership to ship out of the area. Larry Samuels then began telling small dealers they wouldn't be able to carry the Mega line.

There is an old military axiom, derivative of Custer's Last Stand, that one should not divide his forces in the face of a superior enemy. On Larry Samuel's recommendation, Sam Tramiel decided to do just that. By September 1987 Atari had begun an upper-echelon, dealer channel, called Business Computer Centers (BCC's), which had the privilege, for a mere \$2,800 fee, of qualifying to sell the Mega line.

The downside of this is that a lot of very supportive small dealerships were told, essentially, that they weren't good enough for Atari. In the face of Apple's successes with their Mac Plus and new Mac II line, Atari weeded out their dealerships to the point that there were less than 300 BCC's and no more than 400 Specialty Computer Centers, all of which were

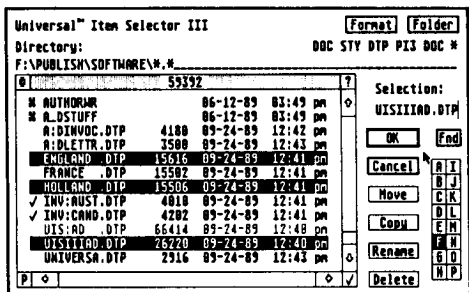
made to feel like second class citizens. I know if I had been cancelled, or rather not given BCC status, I would have dropped Atari then and there. Apparently, quite a few dealers, who were not to cross over into the "promised land," did just that.

A Different Plan

But, Atari had their own plan for success. They had just purchased Federated, a group of 67 electronics specialty stores located throughout the southwest. At a coming-out party to promote our new BCC status at my store in February 1987, Sig Hartmann, and Walt Wilson, vice president of sales, said that Federated would not compete with computer resellers. They would get the 520 immediately, and the 1040 in 1988, but they would not resell the Mega line until late '88 or '89 because it would take that long to build up the supportive environment so essential to display the ST's unique features. Ten months later, all Federateds were well stocked with all of the machines, and Atari was having its last good Christmas at the cash register.

Prior to that, but toward the end of 1987, Larry Samuels invited all of the nearby Atari dealers to Atari headquarters in Sunnyvale to demonstrate the desktop publishing capabilities of the ST. *Ultrascript* was just about to release and, with it and *Publishing Partner*, the Mega seemed poised to become the best desktop publishing value in the world.

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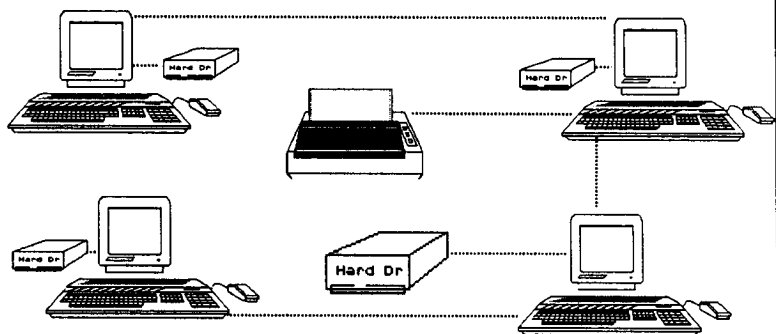
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Part of a small group of people, I had the opportunity to speak with Jack Tramiel. I have personally never felt that users or dealers need Atari or Apple or IBM to hold their hands as they journey into the mysteries of computing. But, dealers do need a consistent marketing plan, and users and dealers both need an adequate amount of advertising so that a computer line will have enough recognition to maintain development and a certain confidence level among users. In other words, the money needs to flow. I told Jack that what dealers needed was just the kind of support that lets the world know that Atari does not mean game machines. Jack answered in a sort of non sequitur, "In 1968 Commodore stock was worth \$2 and in 1982 it was worth \$100 a share and Commodore sold 100,000 machines a month. That's progress!" I don't entirely disagree with that, but two years later, in 1984, Commodore was in the red. Whenever a company like Atari gets into trouble though, "going back to the mass market" is the chestnut they pull out and claim will save the day, as if powerful computers can be sold like Nintendos, and without advertising.

The Vaporware Virus

Even as the Federated fiasco began to become more and more apparent, new software kept coming. First there was *WordPerfect* and *Financial Plus*, as well as Timeworks *Publisher ST*, which was shown at Comdex November '87. Atari made another big splash at this show, but, unfortunately, it served mostly to fuel detractors. The delay in getting the Mega ST on the market had caused Atari's reputation to slide drastically. Atari decided to fill their first Winter Comdex showing with almost nothing but vaporware. The major products shown were the Transputer, also known as the ATW, which was never released in America, as well as Atari's fabled CDROM, and the PC3 and PC4, the latter being 80286 and 80386 machines, which also never appeared for sale in this country. Whitesmith's was sponsored by Atari at Comdex to show *IDRIS*, a UNIX clone which then disappeared, wondering why Atari hadn't delivered their promised support. Sources within Atari explained that Jack liked to throw things against the wall and see if anything would stick.

This Comdex, which got a lot of Atari owners excited, produced almost no viable products. A 3-D Cad program shown there eventually led to *Deskset*, Atari's preferred DTP program. But it's hard to convince prospective buyers that state of the art equipment should include a used typesetter, which in effect *Deskset* was, and it has yet to launch.

Sam Tramiel told me that 1987 was Atari's best year. If so, it was the last year that Atari could win

with a bluff. It is never too late to find success, but it is hard to get there, if you're headed in the wrong direction.

In the middle of 1987, Augie Ligouri wrote a letter which has never been rescinded, stating that all mail order would cease. The letter was sent signed by him and by Jerry Brown, temporary vice president of sales. Atari wanted Computerland and Businessland to sell their line, but what they did was to open dealerships which had access to the whole line of computers, such as J&R Music in New York, and encouraged mail order by MicroTyme and One Stop and Computability in Ohio, by not supervising their sales. This forced BCC's to do music stores' and Federated's computer repairs, with unfair remuneration, i.e. \$15 in future

credit for a repair which a store would normally get \$40-\$60 cash for.

To worsen matters, after Atari bought Federated, it siphoned off a large portion of Atari product line to Federated. When there were shortages you could count on the fact that those shortages would not include Federated stores. Toys-'R-Us never seemed to run out of 520's either. In their new incarnation as the 520STFM, 520's were an attractive machine, but sales were only mediocre due to lackluster marketing by Atari.

Atari has consistently been criticized by users and dealers alike for not advertising in America's primary medium, television. The axiom is, "When you want success, you follow success, unless you are blazing your own trail." In the computer business, IBM and Apple have blazed the trails. Their successful advertising campaigns have included hundreds of millions of dollars in national television advertising. Except for the Lynx, Atari never advertised on national television and as a result, they never achieved brand recognition, or countered the reputation they had, since the invention of Pong, as a game machine company.

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[Bill Yerger is a one-time Atari dealer currently in litigation with Atari Corp. Part 2 of Atari ST History (from 1988 to the present). as seen from the eyes of a dealer, will appear in the next issue of *Current Notes*]

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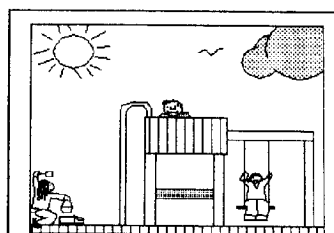
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Disk Requirements: 1 = 1 megabyte, C = color or M = monochrome monitor, D = double sided disk drive, J = joystick, T=TOS 1.4, H = Hard Drive

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No credit card surcharge; cards not charged until orders ready to ship. *Prices don't include shipping: \$3.50 per order (Foreign \$8.00 per disk sent Airmail); 2nd Day Air \$8 (Domestic US only); NO COD's. Slightly Used ST products shipping: call and ask price for items ordered. WA residents add 8.1% on total (including shipping). Allow 2 weeks for checks to clear or send money order for immediate processing; **make checks payable in US funds to PDC.** Prices, contents, and availability subject to change without notice. Disks listed as xxx/xxx (where xxx is a disk number) are 2 separate disks and should be ordered as such. If ordering disks containing nudity, you must be over 21 years old and must say or write that you are when ordering (sign order form if by mail). PS: We're always available to help you with a problem, question, or just to have a friendly chat!



Current Notes PD/Shareware Cartridge No. 1

112 Disks: #347 - #459 (July 1989 to June 1990)

(c) 1990, Current Notes, Inc.

Adventure Games	Games	Telecommunications	
362 A Dudley Dilemma	348 Companion	347 Moterm Elite V1.41	412 ARCTTP
363 Tark	348 Trivia Quiz	381 VanTerm, V3.81	412 ARCXTTP
364 Susan, A Lustful Game (R)	356 Bolo	381 DCOPY V3.2	412 ARC521FX.TTP
364 Love's Rapture (R)	359 Pentimo (M)	422 Uniterm, V2.0E	413 Check V1.1A
365 Pork	360 Bermuda Race II	449 HagTerm Elite V3.3	413 Cheetah V2.0
365 Des Ring	361 Rocket Patrol	449 MiniBBS	413 Diary Acc V1.7
366 Adv Game Toolkit	361 Trifide		413 Recover Trash V1.1
366 Alice	373 Strip Breakout (R)	Utilities	414 DC Showit V1.0
367 Colossal Cave	383 Baseball Simulator	352 Art Gallery	414 Lil Green Sel V1.6b
367 Crusade	387 Empire Maps	352 Degas Snap	414 Super Boot V6.0
367 Elf's Adventure	388 Breach Scenarios	352 Deluxe Slide ShowV2	414 Quick Print V1.0
367 A Fable	389 Star Trek	352 MetaView	414 Star Struck V1.3
367 Ghost Town	390 PileUp V2.0	352 IMG Show	414 Switch 630
367 Paranoia	391 Super Breakout	352 ST Banner	423 Picswitch V7.0
367 Odieu's Quest	419 Blaster	352 Image Ed Acc V0.65	423 SPX Slide Show
367 Squynchia Adventure	419 Invaders	352 Snap Shot Acc	423 B-GIF Converter
367 Underground Adv	419 ST-Tetris	374 Desk Manager V2.1	423 Conv to .IMG 0.90
	419 Draw Poker V2.5	374 Lil Green Sel V1.4	423 Convert PM V1.5
	419 Darts!	374 Pin Head V1.4	423 Ideal IMG Size Acc
Applications	421 ST Tetris (M)	374 DIRsleft	423 Convert PM to PI3
370 Norad	421 Dragon (M)	374 Multidesk V1.1	423 Print IMG Acc
380 Revolution Handbook	421 MacPan (M)	374 HotWire Demo	423 Degas-Pic Acc
382 SubCal V1.14	421 Sokoban (M)	374 MIDI Max! V1.0	423 Degas-to-McPaint
402 Construction Est.	421 Draw Poker V2.5 (M)	375 MegaBlit V2.8 (M)	423 IFF Converter V3.1
424 Micro RTX Demo	426 Mean 18 Courses	375 Quick INF V1.3	423 Convert Spec->Degas
440 Star 2000	428 Eco	375 MegaWatt Acc	423 Multiple IMG Setter
452 Andromeda (M)	428 Orbit	375 Quick Find V1.5	433 Diction Spell Check
452 MegaBlit V2.8 (M)	429 Alien Blockade	375 Quick Index V1.5	433 Disk Label Printing
452 Public Painter (M)	429 Atom Smasher	375 MegaBoot V1.1	433 Form Fill V2.0
455 Inventory Pro, V3.0	429 Gran Prix	375 Quick Label V1.0	433 FI St Screen Fonts
	436 Stellar Starfighter	375 Quick ST V1.45	433 GrafX Display V0.9
Desktop Publishing	436 Flight Levels	375 Quick Print V1.0	433 Paperless Accountant
351 Pub Partner Fonts	436 Lunacy!	375 Quick View V1.4	434 Convert to .IMG
353 Print Master #3	438 MiniGolf (M)	376 NeoDesk Icons	434 Degas Elite Pixel Switcher Acc
354 Print Master #4	438 PBM Chess(M)	376 NeoDesk Demo	434 Invert Degas
355 IMG Woodcuts	438 Gilgalad Adv (M)	377 Atari HD Util V3.01	434 ElectroCop GIF Pics
357 Pagestream Fonts	438 GNCIPHER (M)	379 DCOPY V3.2A	434 ViewGIF V0.8
358 Calamus Fonts #1	446 PileUp V2.1	379 DCOPY Shell V1.2	434 Alslide V2.1
395 TeX: Program	447 Blobbun	379 Diskvfy	435 Flu V1.30
396 TeX: Printer Drivers	447 Virtue	379 Floormatter	435 Biorythm Acc
397 TeX: MetaFont		379 GEMlabel V3	435 Text-Dump V2.0
398 TeX: IniTeX, SliTeX	Graphics	379 Pack V2	435 UC's Disk Lib V1.5
399 TeX: PicTeX, MuTeX	368 Seq: Dunk Shot	385 DC Xtract Acc	435 UC's Clock Acc V3
416 Clip Art Borders	368 Seq: Pitch	385 DC Clock V3.3	435 UC's RAM Acc V1
431 KidPublisher Prof	369 Seq: V.Johnson	385 DC Formatter V3.02	435 UC's MIDI Strobe
432 Calamus Fonts #2	371 Berthold's Pics #1	385 DC Deskey V1.0	439 2acyprry/2accprg
442 Clip Art-People	392 Spectrum #6-People	385 DC Stuffer V0.9	439 NeoDesk Canvas
453 Clip Art-Trans.1	393 Spectrum #7-Space	385 Mystic Formatter	
454 Clip Art-Trans.2	394 Spectrum #8-Cars	403 Cheetah V1.0	
457 Pub ST Borderpack	408 ANI ST	403 Redirect	
	409 Seq: Visitor	403 Pack	
Demo Programs	409 Seq: Froggie	403 Pin Head V1.2	
384 Geography Tutor	410 Spectrum Clip Art	403 Speed Reader!	
386 JILCAD 2D (M)	417 Saturn Pics	403 Address Database	
407 Sheet	418 Seq: Skull	403 Disk Chart	
411 SpiritWare Conc	418 Seq: Dalek	403 File Finder V1.2	
420 .ACCESS!	418 Seq: ZNETart	405 HP DeskJet Utilities	
445 Body Shop		406 Assassin	
445 Geography Tutor	Language	406 Desk Manager V2.7	
450 Master Tracks Jr	349 Xformer Prgs #1	406 BooST V0.9	
456 PageStream V1.8	350 Xformer Prgs #2	412 Arc-2-Lharc Switch	
459 Atari Cash Register	378 Elan-1	412 Lharc-ST V0.51B	
	400 GFA Tutorial	412 ARC Shell V2.1b	
			439 Clock Sync V1.6
			439 DCOPY 3.2A
			439 Fast LZH V2.0
			439 NeoDesk INF Labels
			439 RAMPLUS
			439 ST-UNZIP V2.7
			439 Templemon V1.19
			439 Unlzh V1.61
			439 UNTAR
			439 UUD V3.1
			439 UUE V3.1
			441 TCOS V1.2
			443 List66
			443 Print HP DJ
			443 Q-Text
			443 ReorgHD V1.003
			443 Sentry V1.01
			443 Typecad Font Ed
			443 DCOPY V3.4
			443 DCOPY Shell V1.4
			443 DC Show It V1.1
			443 INF Change
			443 Flexi-Fast
			444 Address Label Pr V2
			444 Convert to .IMG
			444 GEMvelope!
			444 HP Dump
			444 Laserbrain fonts
			444 Trim (blanks)
			444 Monster V0.3
			444 Pin Head V1.5
			451 HP LJ Envelope Acc
			451 HP Laserjet Cont
			451 HP Jet Label V1.1
			451 LaserJet V1 +5fonts
			451 Pretty Print V1.0
			458 Sticker Pictures
			Word Processing
			372 MagniWriter
			401 ST Writer V3.4
			415 Hardware Mods No. 1
			425 DMC Laserbrain
			427 Hardware Mods No.2
			430 ST Writer Elite V3.8
			448 Kepco Edit
			448 Stevie V3.95

The programs listed above are available on CN cartridge #1. Programs are listed by category. Within category, programs are listed by CN disk numbers. The three-digit number indicates the CN library disk on which the program can be found. Note: an (M) indicates monochrome only.

CN cartrdges are \$119.95 plus \$4 shipping and handling. Individual disks are available for \$4 each (10 for \$35) plus \$1 S&H for every 4 disks.

Order disks from
CN Library
122 N. Johnson Rd
Sterling, VA 22170
(703) 450-4761.

VISA and MC orders accepted.

Current Notes PD/Shareware Cartridge No. 3
95 Disks: #460 - #554 (July 1990 to April 1991)

(c) 1991, Current Notes, Inc.

Adventure Games	Education	Graphics	Office	
494 Taipan II (C)	477 Class V2.05	482 Wallace #1 (C)	464 Payroll V3.0 Demo	494 GFA Shell Plus
507 Text Adv Dev Sys	477 EZ-Grade D.	483 Wallace #2 (C)	464 Cost of Living Adjuster	503 NeoDesk 3 D.
507 Ditch Day Drifter	485 Algebra 1: Linear Equations	484 Wallace #3 (C)	464 Checkbook V1.14	503 NeoDesk CLI D.
508 Deep Space Drifter	486 Algebra 1: Verbal Problems	491 Wild Flowers (C)	493 B/STAT Ver. 2.36	506 TLC-Play
513 Disenchanted	487 Basic Math Skills: Operations	497 Public Painter V0.1 (M)		506 TLC-Namr
	488 Grades, Interims, Student Teams	518 Union Demo (C)	Reference	506 TLC-Form
Desktop Publishing	495 TestMaster V2.01		480 Current Notes Catalog	506 TLC-Attr
461 Calamus Outline Art Demo	516 Stargate V3.0 (M)	Kid Games	481 CN Macintosh Collection	506 Mouse-db V3.0
469 PageStream Font Editor	530 Cinema	476 Me First! V2.0 (C)	489 Area Code Locator	506 Spirit Editor
470 Clip Art #14-People	530 Flash Card	504 KV-Match (C)	489 Postal	506 A1-Time
471 Clip Art #15-People		504 Letter Hunt (C)	509 GENie Files 9/90	506 Clock-5
521 Clip Art #16-Old Cars	Games	504 Ench. Forest (C)	515 Starting Block Columns	506 Mouse Accel. V3
522 Clip Art #17-Cartoons	462 Bloodwych D.(C)	504 KV-Geog-1 (C)		506 Oculartx
523 Clip Art #18-Misc Themes	463 Blood Money Demo	505 SDI Adventure (C)		506 Idle-22
524 Clip Art #19-High Res Pictures	463 Wipeout D.	505 Mansion Adventure (C)	Telecommunications	506 UnLZH V1.72
538 Calamus Fonts (Advertise, Architect, Barnum, Broadway Engraved, Causal Loose, Celtic Roman, Flash Book, Fancy Chancery, Harloe, Kleranden Heavy, Mouse, SchoolBook, St. Francis, Suizo, Tiphany, Univ Bold, Univ Roman, Wild West, Windsor.)	465 Stocks and Bonds (M)	505 Mountain Adventure (C)	472 Instant Graphics! V2.14	506 Volume
	478 SpaceWars V1.0	535 KidMixup Plus (C)	473 Instant Graphics! Utilities	506 ST Sentry V5.1
552 Calamus Fonts (Lucifer, Tiempo, HORSE CAPS, LEE CAPS, MEDICI, ZALESKI CAPS) plus GENie messages.	479 Hero IID D.	536 Rabbit (C)	474 MiniTerm Desk Accessory	519 Printer Utilities
	499 Starblade D.(C)	536 Santa Clause (C)	474 MiniBBS Bulletin Board System	531 Quick ST 2.2 D.
	500 Yolanda D.(C)	536 Burger (C)	510 Nite Lite BBS	531 Little Green Selector V1.88
	500 Rick Dangerous D.(C)	536 Circus (C)	510 Vulcan Embassy BBS	531 Gram Slam Grammar Checker D.
	501 Photon Storm D.(C)	537 Robin (C)	517 Aladdin Program	548 Backup ST
	501 Aquanaut D.(C)	537 Perfect Match (C)	520 Air Warrior, V2.0B	548 K-Text V1.33
	502 Kid Gloves D.(C)	537 Makin' Aiken (C)	553 Aladdin's Magic Browser V1.1	548 SText V1.1
	502 Back to the Future Demo (C)	537 KV-Fonic (C)	553 GE files in Aladdin format	548 PFXPAK
	512 Sorry (C)	542 Wuzzlers (C)		548 Library Master
	512 ST Square (C)	542 Rebus Writer		548 TX2-View V1.35 D.
	514 Pileup V3.0 (C)	547 Barnimals (C)	Utilities	548 Pinhead V1.8
	525 Gran Prix (C)	547 The Wolf and Seven Kids (C)	475 HyperScreen	548 Bigcolor V1.05
	532 Maniac Miner (C)		475 STDCAT V4.3	548 SANDP V2.1
	532 Valgus	Music/MIDI	489 Shreader V1.1	549 Arc to LHARC Switcher
	533 Collapse V1.1 (C)	466 16-Voice Sequencer	489 Hot!Stat V1.1	549 Arc Shell V2.3
	533 Jeopardy (C)	498 Equinox Sound-Tracker V2.5	490 Virus Killer V3.11	549 UNLZH V1.61
	533 Valgus 2 (C)	511 MIDI Mike V1.0	490 Hospital	549 ARC V6.02
	533 Triple Yahtzee (C)	511 Music Studio Song Player V1.2	490 Super Virus Killer	549 LHA V1.21
	534 HacMan II (C)	511 MS Player	490 Flu	549 Arcgsh V3.5
	539 Toyota Rally D.(C)	527 Alchimie Jr. Music Sequencer	492 FastCopy III	549 Unerase
	539 Flimbo's Quest D.(C)	527 Name That Tune	492 HyperFormat	551 SuperBoot V7.0
	539 Defender II D.(C)	528 Name That Tune Misc Songs	492 ARC Version 6.02	551 Autosort
	540 Simulcra D.(C)	529 Name That Tune TV Songs		551 Digiedit
	540 Spellbound D.(C)	544 Personal Music Librarian		551 Picswitch
	540 9 Lives D.(C)	545 Musicalc V2.02		551 SnapIt
	543 Midi Maze II	546 TCB Tracker Demo		551 MassKill
	550 STRabble			551 FormDolt
	550 Nova			
Demos				
460 DynaCadd D.				
464 Personal Finance Manager Demo				
465 Mail Pro Demo				
526 eSTeem PILOT D.				
541 God's Word 2 D.				

Note: A (C) indicates color monitor, (M) monochrome monitor, and "D." a demonstration version. These disks are all available on a single 44 megabyte Syquest removable cartridge (\$119.95 plus \$4 S&H). Disks can also be ordered individually for \$4.00 each (10 for \$35) plus \$1 S&H for every 4 disks. Order from Current Notes Library, 122 N. Johnson Rd, Sterling, VA 22170. (703) 450-4761. VISA and MC orders accepted.

Current Notes S7 Library New Disks for July/August

#570D: B/STAT, V2.4 is a sophisticated graphing and statistical analysis program by Robert Wilson. Shareware, requires 1 MB and a DS drive.

#571D: ST WRITER, V4.1. There are many changes in this popular word processor since version 3.6. Now works with Moniterm monitor, STE and the TT, has increased compatibility with AtariWriter+, combines menu screens into one screen, GEM is always active, and alert boxes now work alone as opposed to in parallel with command box alerts, and the STWRITER file may now be modified to hold your default settings for screen color on boot-up (black or white background), tab setting, default file extender, and format line settings.

#572D: STE DEMOS NO. 1. MYMONO: Fastest monochrome emulator just for the STE. It uses the STE's advanced graphics chips for a software interlace mode which makes it look like a monochrome monitor! **BOING STE:** By Tony Barker of Sydney, Australia, this demo illustrates the speed of the Atari blitter at performing bit orientated memory moves. At any one time, approximately 400 colors are being displayed on the screen. **SPACE HEAP!** demonstrates the STE's smooth scrolling, PCM sound, and extra colors.

#573D: STE DEMOS NO. 2. COOL STE: An Cool on the Atari STE, 4,096 colors on your screen at once. **META STE2:** 284 GEnie messages on the new Mega STE - a wealth of questions, and answers, about the new Mega STE.

#574D: ARCADE GAMES. (C) SEASIDE - a terrific concentration game. Try and match up the sea creatures and make pairs to gain points. **DRACHEN** - V2.0, is derived from an old game from China. 144 tiles are built up on 5 levels on the playing surface. The goal is to remove all the tiles. **COLAWARS** - colorful arcade action by David Jolley. **SPLATTER** - by Dennis Booth, patterned after REACTION, provides for up to four players. Outwit your opponents by being the person with the most tiles at the end of the game. **SPACE JET** - Simple space shoot'em up.

#575D: GAME DEMOS. (C) VALGUS`2 - v3.0, the seven familiar Valgus pieces as

back, this time they come at you from all four sides of the 25x25 playing area. Instead of completing lines across the screen, complete squares around the center block. Very addictive! Try this out. **MAH-JONG** - a Shanghai clone, contains a solvable example of each of several layouts. **PIPE MANIA** - Three levels are playable up to a certain time limit. Place the pipes around the screen to make the maximum pipe length for the ever-flowing flooz coming down the pipe. **WORDBID** - Bid on letters as the word platform descends closer to its doom. **BJP3DEMO** - simulates a real casino environment. Explore the game of blackjack. **DEBUT** - short "sneak preview" of this new planet simulation game. These last two are not playable, but only tease you with what is coming.

#576D: ARTISTS TOOLBOX. (C) NEOCHROME - V0.5, a painting program from Atari for the low resolution mode of the Atari 520ST personal computer system. **XS FX/D'ARTISTE** - a full featured drawing program that works with ST's or STE's. Use 512 or 4096 colors with tools such as boxes, ellipses, circles, line tools, bezier curves, etc. and also includes a special effects menu and ability to create sprites for your own program. Color cycling is available as is the ability to create rudimentary frames of graphics for animation. Fill patterns can be chosen from the large selection or create your own custom patterns. Special effects allow for flipping, sizing, negating, etc. Shareware from Deto Soft. **DELUXE PAINT ST DEMO** - by Electronic Arts, shows off the terrific power of this new paint program. Try it out and see what you can create.

#577D: UTILITIES. BENCH2 - NBM is a benchmarker which will time your machine through 5 tests. **CAL51** - many new features like automatic HotWire alarms and DC-Squish compatability! See calendar of any month/year. Attach events to days by date or position in month - never forget a birthday again! **D-VIEWER** - a simple text viewer that allows you to view files without using the keyboard or holding down mouse buttons, smooth scroll the text so that it is easy to read, and adjust the speed of the scroll to a comfortable reading speed. **DBLEFEAT** - shareware accessory disables the growing and shrinking box effects associated with GEM windows and dialog boxes; it will also allow redirection of drives - a program that always looks for files on drive A can be redirected to another drive! **DC-MWRAP** - DC Mouse Wrapper will 'wrap' the mouse cursor when you hit the edge of the screen. Go up, and hit the edge of the screen, and the mouse goes to the bottom of the screen! **DEFSEL** - The Definitive File Selector will replace the old file selector and provide you with many more options.

DIRPRINT - a simple, yet useful, desk accessory that has just one function: to print out a listing of all the files contained on a disk. **DL II** - a checkdisk/unerase/diskedit program with the a host of useful functions will run on any ST in medium or high res. **FILESORT** - a simple program for anyone who has an ASCII text file (i.e. list of stuff...) to sort. **FPPRNT** - a little printer character output routine that just outputs characters to the printer port a bit more efficiently than TOS does. **LITEMAIL** - V. 2.02 of simple, straightforward GEM-based mailing label program. Print labels sorted by name or zip; search by name or zip. Holds about 3500 labels on a 1040, 1500 on a 520. **MSE-TRIX** - Mouse Tricks is a desk accessory mouse utility that gives the user extensive control over mouse movement and menu style, and uses the right hand button to provide a range of special effects. Also includes a text reading utility, Read Text, (with find, position mark, block print and save functions) that permits the user to load, read and switch between as many as eight text files within any program that allows access to desk accessories. **RE-ORG** - improves performance on hard and floppy disks through better placement of subdirectories and their files on disk, and through defragmentation of the files themselves. **RT-MOVE2** - enables you to move (as opposed to copy) files on the GEM Desktop by holding down the right mouse button instead of the control key. For TOS 1.4 ONLY. **RFTDCA** - converts a DCA/RFT file to WordWriter-ST and back again.

#578D: UTILITIES. DTERM-1K - a 1k version of DTerm terminal emulation program. **ELFBOOT** - powerful new STARTUP utility for your ST gives you more control over your ST than you ever thought possible, with features and options that surpass many commercial offerings! **GEM-XYZ** - a shareware GEM version (2.01) of XYZ protocol for transferring files via modem. **LHA130** - V1.30 of LHA, the comprehensive archiver/unarchiver for LZH files. Handles all known variants of the LZH archive, runs significantly faster than v1.21, and offers several new features, including optional archive encryption/decryption. **PSFONTVW** - PageStream Document file prints out All the characters in a PageStream Font as well as examples of the most used attributes and several point sizes. **QTTP** - generate "quotes" for your BBS. **SORTIE** - V1.0 will sort any directory or folder by Name or by Date in ascending order (oldest files first). Sortie works both in unattended Batch mode. **STREE104** - allows for searching for files using many different types of criteria. Once files are located, many disk operations can be performed on them. **VERIFY** - turn off the verify on your floppy drives. It will greatly increase the speed of writing to your disk and deleting files from your disks.

#579: **GRAPHICS UTILITIES.** DMJ-GIF - GIF to Spectrum picture converter. GAL- LERY - converts a DEGAS picture into a self-showing program. GVIEW105 - V1.05 of GEMView, the picture-viewing accessory. View .GIF, .IMG, .NEO, .PI?, .PC?, .TNY, .SPC, .SPU and other file formats. Dithering, half-toning, and save capabilities - a must have for any ST/TT owner.

I-FLOYD - A color IMG file viewer specifically for MONOCHROME systems. MAC2IMG - convert MacPaint files into the IMG raster graphics file format. VIEW - whenever you double-click on any graphics file (Spectrum, Tiny, Degas compressed or uncompressed, NEOChrome), VIEW will automatically display the picture. Disk also includes several IMG pictures of Jets, Religions themes, Police, and Computer images.

Disks Introduced in June, 1991

#560D: **OTHERWUZ.** (C) Wuzzlers is a hangman game with a twist: a picture hint is displayed with each wrong answer, thus increasing the chances for success. This file contains WUZZLERS.PRG and a WUZZLERS.DAT file with nearly 50 picture/word puzzles for the game.

#561D/562D. **THE BIBLE SERIES NEW TESTAMENT.** These two disks contains 28 ARC files totaling 1,311 files. The original disks where the ARC files are on, were formatted to 830K Twister format. After these file are unarced they will take up 8 SS/DD Disks. This program took seven years to develop and is Irving Risch's gift to the Atari Community. It will run ok on a floppy system, but a hard drive is recommended.

#563D: **GAME DEMOS.** BUGST - This is a one level playable demo of *Bug Bash* by Big Shot Software. You must clear the level of all trash. Use your insecticide gun to kill enemies and watch out for the end of level guardian! CAPTIVE - Playable demo of *Captive*, an excellent futuristic game with the Dungeon Master mouse-view type gameplay. An excellent game if you enjoy this type of adventuring. MSTDRIIVE - This is a two-level playable demo of *Jupiter's MasterDrive* by UBI SOFT. When the light turns green, accelerate by pressing fire. You can shoot the opposition by pushing up on the joystick. It is a three-lap race in all. POND - This is a one mission playable demo of *James Pond* by Millenium. You must gather eight gold bars from the wreck of a large, sunken ship, and take each bar to the waiting row boat somewhere on the surface of the sea.

#564D: **TEXT EDITORS.** 2BS FKEYS - 2-Bit F-Keys V0.92, allows you to assign a text string to your function keys.

You can assign F1 through F10. You can also assign Shift-F1 through Shift-F10. After running the program & assigning your text to the function keys you can then run other programs (e.g. text editor, word processor) and press a function key to print often used text (e.g. name, address). ELVISED, GNOME, and MGEMACS - These are three UNIX-style text editors for the ST. These editors were discussed in the June/ July 1991 issue of START. Includes documentation. MINITX22 - This is the "mini" version of the TX2 File Viewer version 1.42. It has most of the new features added since 1.35, including graphics, yet it is only about 4K larger than the old mini version. NOT a demo. This also fixes a bug in the monochrome display of large graphics. STEXT14F - This is a new version of SText. Version 1.4e had a bug where it would not save a block properly. SText is a fast file reader that has block print and save, print to page to page, powerful status line, and supports the STReport Index format. Many other powerful features. Shareware. TALKER - Talker is a talking text file reading program. The speed and pitch are adjustable. V1.1. TX2CNVT4 - This is the latest version of the TX2 Converter. It has been updated to support GENie Lamp PR magazine and AUA Newsbriefs. Also, Z*Net and STReport formatting has been improved; most known bugs were removed.

#565D: DESKTOP UTILITIES.

GOGOST4I - GoGo-ST is a replacement for the Desktop. It allows very quick access to all you programs and files. For example, to load a file called TEXTDOC into your Word Writer wordprocessor, just click one time on a TEXTDOC! When done, click once on LDW for a spread sheet session, then back to another wordprocessor session, all without seeing the Atari Desktop. This is a fully functioning version with a request for a shareware contribution. BOOTMSTR - BootMaster is an AUTO folder program that allows the user to configure the programs and data files to be used when the system boots. The program allows disabling and enabling of auto folder programs and desk accessories, in addition to providing access to renaming files so that multiple ASSIGNSYS files or other data files can be chosen instantly, on bootup! MAX30DEM - This is the demo version of MaxiFile 3.0, the Supertool from CodeHead Software. MaxiFile 3.0 takes the concept of file management several steps beyond any previous ST program, with an awesome text viewer, a graphic/numeric display of disk space, an unparalleled file/folder search function, dual directory display (w/ simultaneous window scrolling), full keyboard control of everything, true MS-DOS disk formatting, and much more! MENUPLUS - Menu Plus is a complete desk top enhancement that will allow you to quickly launch (run) up to 160+

programs on your hard disk or floppy disk. New tree style menu system allows you to set up Main Menus and Sub-Menus. Also included is the Menu Mate accessory. Menu Mate will allow you to view Degas, Spectrum, Neochrome files, show/print text files. ZEST - Here is a little demo program that simulates the look of the NeXT desktop in GFA. Source code included. The demo includes a calendar, database (address book), typewriter and paint program. Use the ZeST interface for your own GFA program! Requires a mono monitor.

#566: **CAPITAL FUN!** V1.00, (C) 1991 Enque Software, is designed to teach and reinforce fundamental capitalization rules. Capital fun was created for second to sixth graders, and tested extensively with the aid of the Lone Jack third grade in Lone Jack, Missouri. Although designed for class use, Capital Fun is just as effective in the home. In the learn section each concept is presented as a rule and modeled for the student. The student then has opportunities for both guided and independent practice to ensure comprehension of the concept. Finally, in the apply section, students must remember and use all concepts learned within the context of a paragraph.

#567: **UTILITIES.** ACCI3 - Accessory V1.3, by Murray Levine, is a program that will let you load all of your accessories out of a folder called ACCS on the boot drive instead of loading them out of the root directory of the boot drive. This helps to keep your main directory less cluttered especially for hard drive owners. ARCSH25 - ARC Shell 2.5, the program that adds a friendly and powerful GEM interface to ARCTTP and LHARC. Now featuring: an expanded link with CodeHead Software's new MaxiFile III! ARC Shell 2.5 takes advantage of a "back door" built into MaxiFile III, letting you select multiple files for archiving - even files from different directories - with one move! Choose everything you'd like to arc, and walk away from the computer while it does the work for you - no more waiting to select the next file! (Requires MaxiFile 3.0 or later.) Version 2.5 also fixes a bug in 'Extract w/Query' which prevented all files in an archive from being listed. Shareware! Copyright 1991 Charles F Johnson & LGF Software. AUTOARC - 100% functional shareware program for the automatic archiving of files. AutoArc uses your archive program to create daily, weekly, monthly, or custom archive files of selected file types. You can configure it to archive files after they reach any age. Also will delete arced files after they reach a specified age to keep your disk clean. Can be set to ignore files which have already been arced. Run as auto-boot or manually. Includes a separate GEM based configuration program to set up multiple archive/delete schedules. DCBOOTIT -

DC Boot It v1.0, (c) 1991 Double Click Software. Freeware program. DC Boot It allows you to run a 'BOOT DISK' from the desktop. Simply run DC Boot It, pop in a 'BOOT DISK' (like a game disk) and BOOT IT! This has the real advantage for accelerated computers, since you can set the machine speed before booting. You can also go to 50 Hz mode before booting the floppy disk. **DCLEFTY** - V1.0, Freeware from Double Click Software. DC LEFTY is for the left-handed Atari users. DC LEFTY swaps the LEFT and RIGHT mouse buttons. So now when you press on the right mouse button, it thinks it is a left mouse button, and vice-versa. **DCPOPBAR** - V1.0, (c) 1991 Freeware from Double Click Software. DC PopBar gives the GEM desktop a popup menu of the menubar entries. Now all menu entries are available in a popup menu wherever the mouse is. **DC_RT_DC** - With DC Right DC installed, a quick right mouse button click will emulate a left double click. 100% assembly. ST, STe and TT compatible. **DCTOPPER** - DC Topper will automagically top the window under the mouse. Best at the desktop, but can be turned on in programs. 100% assembly. ST, STe and TT compatible. **FLRMT3_5** - Embedded custom formatter, direct FDC formatting (change all 5 sector gaps, select sector size of 128,256,512,1024 bytes, skew formatting with a user selectable factor from 1 to 18 sectors and more!) Embedded virus utility: Intelligent virus checking (less falsing on boot disks) automatic virus templating and matching, graphic virus representation (DNA footprinting of virus), user expandable known virus library, virus kill/immune. All this plus an expanded floormat main module with new multi drive/disk formatting, disk volume labelling, and the old functions (IBM formatting, undo accidental formats, change cluster/directory/fat size, space age interface. **FUNKALERT** - Funk Alert! Shareware by Charles F. "Godfather of Soul" Johnson, (c) 1991 Little Green Footballs Software, V1.0. This is a tiny program (it uses less than 1K when installed!) that assigns the buttons in GEM alert boxes to the function keys F1, F2, and F3! This means that any program that calls the GEM AES form-alert() routine (i.e. almost every GEM program) now has built-in, easy to remember "hot key" equivalents for its alert box buttons! **LZHI1318** - Latest version of LHARC, version 1.1318. Complete with documentation in German and English. **MKRMDIR** - .ACC that will let you make or remove folders (dirs) within other programs that allow you to access the DESK menu. Good for those programs that do not have this option built in. **MULTI135** - MultiArc 1.35, an archive shell with a difference. Extract multiple archives into separate folders with a single click from the desktop. Compatible with NeoDesk 3. Much more efficient for viewing and extracting from ar-

chives than traditional archive shells. Version 1.35 adds archive program configurability - you can change the command prefixes passed to the archive program. This allows the program to be used with just about every archiver out there; lots of neat features. **SQUEESIM** - Squeezes the last drops of disk space out of IMG files and won't hurt them a bit. Has the ability to auto-delete those semi-useless "sister" .GEM files TU creates. Squeezes 2% to 60% of extra space out of any IMG. This version preserves the time/date stamp of the IMG files. **ULTRA** - This program will "ARC" complete disks into a single file. Great for those demo disks with "Hidden" directories that can't be accessed or copied by TOS. Works great! Note: needs two drives.)

#568D: DYNACADD DEMO, V1.84. Two ARC files on this disk include part 1 and part 2 of a two-part DEMO version of DynaCADD that replaces the earlier DEMO. This version contains both the Makeplot Program and The Font Editor as well as a complete save-disabled version of DynaCADD. Note: This is not the TT version although it will run on a TT Mono only! One meg or more!! (Replaces CN #460D.)

#569: AIR WARRIOR V2.0e Air combat simulator for multi-player battles on GENie or individually in practice mode. (Note: this disk replaces CN #520, V2.0b.) Improvements since version 2.0b include: The plane weight equation is now correct when the ammo is loaded on-line. A funny looking debug that was left in the radar code has been removed. A terrain database problem which caused the rivers to appear in the wrong place with respect to the mountains has been corrected. The pipper setting is now preserved between flights. (but not in config file). The tracers-with-no-bullets bug has been fixed. Gunnery has been modified to send additional data to the host to allow more sophisticated hit/damage calculations. Trucks have been added for your driving pleasure. The new terrain contains hills that can be drive over or landed on. A new command F10 has been added to film playback which will display the elapsed time since the beginning of the film. The Host can now apply initial damage (or lower the fuel octane) to a plane. Note: This version of Air Warrior has undergone very stringent testing between the different computers (Macintosh, Atari ST, Amiga, and IBM PC) to ensure that the flight performance of the different planes is the same.

Disks Introduced in May 1991

#555D: UTILITY NO. 49: ABFormat; Calendar Desk Accessroy V4.7 and CALSH47A; HotWire's screen saver and mouse accelerator; IMG2ICN, convert .IMG files to Degas Elite; IMGVIEWR, view .IMG

files in 4-windows; MCF, desk acc shows directory structure; ST-TOOLS, PC Tools look-a-like; TN-PCALC v1.2 a windowed printing/programmers calculator; TLC-AT-TR displays ALL files and allows changing attributes; TLC-FIXR, simple changing of text strings in programs; TLCFORM2, formats in a faST 9 sector or in a standard 10 sector format. TLC-NAMR, allows use of ALL the ST's characters in filename; TLC-PLAY, loads and manipulates ALL digitized sound file formats. TLC-SHOW, quick and dirty Spectrum viewer; X-MON, replacement driver for Moniterm monitor.

#556D: CALAMUS NO. 4. Glip fonts. ACURANSX, an Acuransx created in Outline ART THEGUNTH, 2nd place winner and Jitney, 1st place winner in Outline ART contest. MYCALNDR, calendar. PST FONTS.

#557D: HERO! DEMO. new graphic adventure game featuring hundreds of items and creatures and over 200 rooms to explore.

#558D: ST GAMES: AMAZE, (c/m). DARK CASTLE, a board game, requires at least 2 players with a max of 4. (c). Daniel's Dungeon, a maze game (c/m). Reaction takes after arcade game ATAXX and is very hard to beat! (c). Super Mastermind, use logic to determine computer's hidden code.

#559D: FINANCIAL UTILITIES. FGGRAPH demo produces many types of common business and scientific graphs. AP-ROCALC, professional, commercial-quality desktop calculator. BIGBUX13, helps you manage your money. CHECK-BK and Chekbook v1.19.

Disks are \$4.00 each (10 for \$35.) plus \$1 S&H/4 disks. Order from: CN Library, 122 N. Johnson Rd., Sterling, VA 22170. VISA/MC orders accepted (703) 450-4761.

Current Notes Summer Subscription Special

Subscribe (or Renew) and choose ONE FREE disk from the CN library.

Subscribe (or renew) for two years and choose TWO FREE disks.

Offer expires on
September 1, 1991.

AtariFest Time!

July 20

2nd Annual Blue Ridge Atari Fest

This event will take place at the Westgate Shopping Center in Asheville, NC on July 20 from 12:00 to 6:00+. Computer Studio has made arrangements for show space at the shopping center, and Blue Ridge ACE will be providing tables and display space as needed by exhibitors at no charge. Exhibitors will include Atari Corp (Bob Brodie), CompuServe (Bill Aycock), GENie (Darlah Pine), Double Click, Goldleaf Publishing, ICD Inc., ISD Marketing, KAUG, Kid Programs (D.A.Brumleve), ST-Report, Step Ahead Software, Willard Productions, K5/K5M Voice Librarian, and KAUG.

Asheville, located in the heart of the Blue Ridge mountains, is one of the main vacation capitals in the east and is centrally located for easy accessibility. Take any major highway into Asheville (US 19-23), US 26 or I-40) to the I-240 loop, then take the "Westgate/Hilton Inn Drive" exit into the Westgate Shopping Center parking lot. For more information contact: Clifford Allen, c/o Computer Studio, Westgate Shopping Center, Asheville NC 28806 (704) 258-3758. GENie: C.Allen17. INTERNET: callen@UNCA.EDU.

July 27:

AtariFest '91

For a third year, an AtariFest is planned at Indianapolis, Indiana on Saturday, July 27th, sponsored jointly by the user groups at Indianapolis, Bloomington and Purdue known as MIST (Mid-Indiana ST). The show was formerly titled the MIST SwapFest, and took place in Nashville, Indiana.

Last year's show was quite successful, and this year looks like it'll be even better! D.A.Brumleve, AIM, Compuserve, Clear Thinking, CompuServe, Computer Works, ICD, ISD, Missionware, MS Designs, One Stop, SoftLogik and others have committed to attend this year. Two rooms will be available with nearly 4,000 square feet of space.

MIST AtariFest III will be held at the Castleton Mall Conference Center on the north side of Indianapolis. The address is: 6385 Castleplace Drive, Indianapolis, IN 46250-1902. Public admission to the 'Fest will be \$3.00 and will include a raffle ticket. We will be raffling hardware from Atari Corp and software from attending vendors and developers. For more information, call William Loring, BLAST, 812-336-8103 (GENie: W.LORING1) or Dan Ward, AS-CII 317-254-0031 (GENie: D.WARD10).

September 14,15

The Glendale Show

The Southern California Atari Computer Faire, Version 5, AKA The Glendale Show, will be Saturday and Sunday, September 14 & 15, 1991. Saturday's hours will be from 10 am to 6 pm and Sunday's hours will be from 10 am to 4 pm. The show will again be at the Glendale Civic Auditorium, 1401 N. Verdugo Road, Glendale, CA.

For more information contact John King Tarpinian, 249 N. Brand Bl, #321, Glendale, CA 91203. (818) 246-7286.

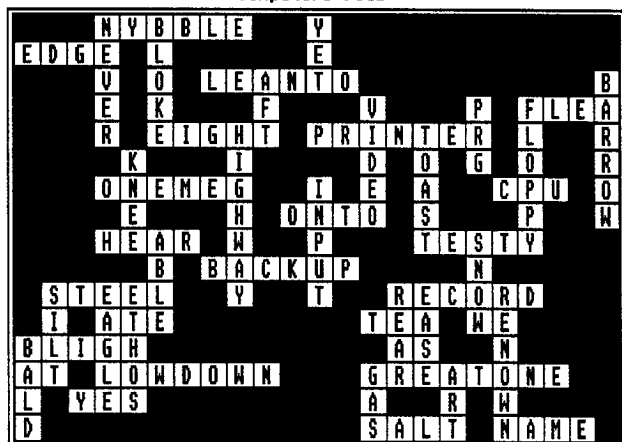
October 12-13:

The WAACE Atari Fest

AtariFest '91 is presented by the Washington Area Atari Computer Enthusiasts and will be held at the Sheraton-Reston Hotel, 11810 Sunrise Valley Dr, Reston VA 22091. User groups, seminars, vendors, software, hardware, swap room, desktop publishing, demonstrations, door prizes, midi games, telecom, education, entertainment, utilities, applications, IBM & Mac emulation, business, animation, art, graphics, developers, programmers, friends, bargains, fun, & lots more ...

For more information, contact Charles Smeton at (301) 465-8628, or on GENie mail as C.S.Smeton. For vendor information, contact John Barnes at (301) 652-0067, or on GENie mail as J.D.Barnes.

Computers Plus



Created with Crossword Creator

Here is the solution to last month's (June) crossword puzzle.

Current Notes Atari Club List

Members of listed Atari clubs may subscribe to *Current Notes* at a discount rate of \$23/year (or \$42 for two years)-- over 40% off the newstand price! Add your club to this list. For more information, call Joyce (703) 450-4761. Note: Canadian clubs are also eligible. Rates for Canadian club members are \$31/year (or \$58/2 years).

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Crestview, Huntsville AL 35816
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PO Box 36364, Phoenix AZ 85067
602-278-2375
SE Valley Atari Connection, Tim Bar, PO
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602-821-1200
Tucson Atari Central, Ray Waters, 1426 W
Kilburn Rd, Tucson AZ 85705-9232
602-887-4196

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28 John Hancock Cir, Jacksonville AR
72076 501-985-2131

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Bernardino CA 92404 714-880-3539
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Knoxville AUG, John Cole, 9109 Parktop Ln, Apt C, Knoxville TN 37923 615-691-4435, BBS: 615-691-0113

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STDIO, Ralph Plaggenburg, 904 N 33rd Pl, Renton WA 98056 206-228-5303

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Southwest Washington Atari Group, Allan Cokes, PO Box 1515, Vancouver WA 98668-1515, BBS: 206-574-1146

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Wisconsin

Central Wisconsin AUG, Thomas Ptak, 217 S Schmidt Ave, Marshfield WI 54449 715-387-4512

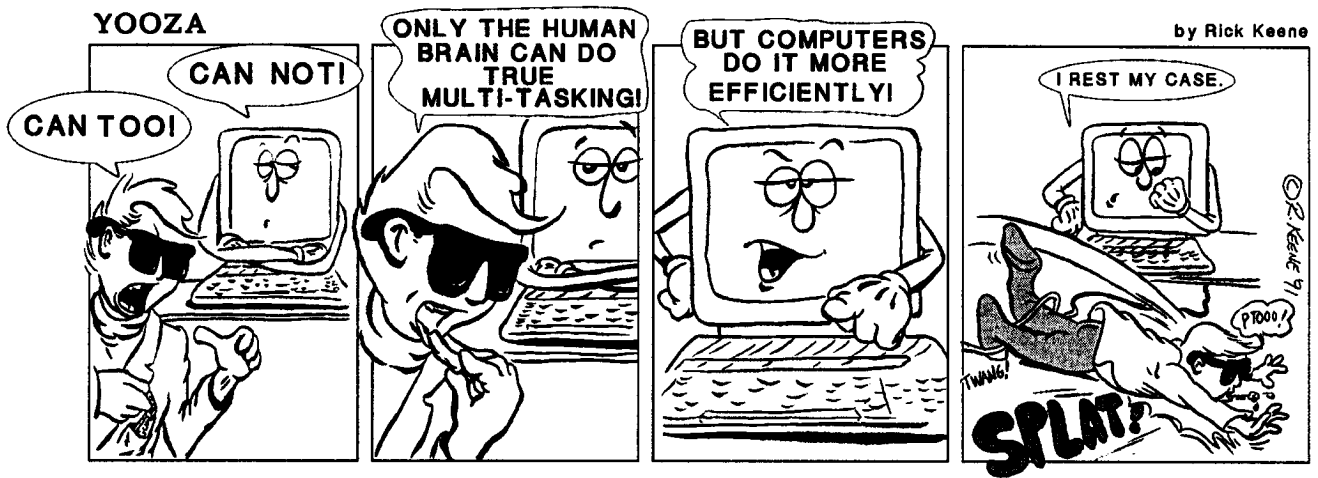
Milwaukee Area AUG, Linda Heinrich, PO Box 14038, West Allis WI 53214 414-421-2376

Milwaukee Area ST User Group, Bruce Welsch, PO Box 25679, Milwaukee WI 53225 414-463-9662

Packerland ACUS, Peter Schefsky, 2714 South 11th Pl, Sheboygan WI 53081 414-457-451

SUMMER CHECKUP

This summer we will be sending a card to each of the clubs listed to verify that the club still exists and the address is correct.



CLASSIFIED ADS

FOR SALE: Original 520ST, external PS, external SSD, excellent SC1224 color monitor, manual modem, and software. Will NOT read disks! \$200. Call Bob at 703-633-2160.

FOR SALE: Atari 800XL w/324K, 850 interface, 1050 disk drive, Percom DS/DD Master Drive, SF 314 DS/QD w/8 bit adapter, 12 inch color monitor, and a full library of programs. Best offer for each or all. Call Jason at (703) 569-9255.

BIG MONITORS for the Mega ST: Monitem 19" MONO with card, \$700. ISAC card and 19" RGB monitor, \$1200. Smallest floppy drive for the ST: 3 1/2" 720K drive (1 1/8" x 4 1/4" x 6 1/2"), \$100. 5 1/4" 360K drive (2" x 6" x 9 1/2") \$100. All drives complete. Use as 2nd drive only. Call Pich (415) 564-5658 (CA).

JOHN SPOHR of Japan, I have not received \$27 of postage fee. My address is 2247 Cecilia Ave., San Francisco, CA 94116.

FOR SALE: 520ST and DS/DD floppy drive. \$235. G. Graham, 1305 Gilliam Dr., Farmville, VA 23901 (804) 392-8306.

WANTED: Atari Portfolio and/or accessories, printer-24 pin or laser (ST ready), PageStream, Spectre GCR, Stereotek 3D, and 2400 modem. Best offer will receive money order immediately + possible bonus. Send offer to M. Young, Box 5771, Riverside, CA 92517.

WANTED: Dead or Dead! Atari 1050 or Percom single disk drives. Operating condition unimportant if drive is physically/cosmetically intact. Will pay up to \$30 for dead 1050, \$40 for dead Percoms. Ben Poehland 179 Sprout Rd. Frazer PA 19355

CN BACK ISSUES. Remember you can order back issues of CN. 1987/88 issues are \$1.50 each; 1989 (\$2.00 ea); 1990 (\$2.50 ea); and 1991 (\$3.00 ea). Order from Current Notes, 122 N. Johnson Rd., Sterling, VA 22170.

Send your classified ads into CN Classified, 122 N Johnson Rd, Sterling VA 22170. Cost is \$0.03 per character.

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Branch Always	206-885-5893	61
Current Notes ST Library	703-450-4761	72
D & P	800-535-4290	ifc
D. A. Brumleve	217-337-1937	71
Debonair Software		64
Electronic Clinic	301-656-7983	71
Gadgets by Small	303-791-6098	66
Gribnif - Neodesk	413-584-7887	51
Gribnif - Cardfile3	413-584-7887	55
Gribnif - Steno	413-584-7887	59
Hi-Tech Advisers	800-882-4310	68
ISD Marketing	416-479-1880	obc
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L & Y	703-643-1729	45
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After the War	27	Escape of Robot Monsters	15
Alien Syndrome	31	Eyes of Horus	25
Altared Beast	39	F-16 Combat Pilot	31
American Dreams	31	F-19 Stealth Fighter	46
Anarchy	27	F-29 Retaliator	37
Antago	27	Falcon	32
Aquasaut	32	Falcon Mission Disk 2	19
Arcade Force Four	33	Feudal Lords	37
Astro Marine Corps	27	Fierdsh Freddy	34
Atomic Robo Kid	38	Fighter Bomber	38
Awesome Arcade Action Pk	37	Fighter Bomber Mission Disk	24
Back to the Future 2	34	Fighting Soccer	34
Bad Company	34	Final Command	37
Balance of Power 1990	39	Fire	29
Batman the Movie (HC)	27	Fire Brigade	33
Battle Chess	34	Fire and Brimstone	31
Battle Command	38	Fire and Forget II	34
Battle Master	38	Flood	29
Battle Tech	35	Fools Errand	38
Battle of Britain	45	Full Count Baseball	26
Beam	22	Full Metal Planete	34
Beverly Hills Cop	31	Future Basketball	34
Billy The Kid	27	Future Dreams	34
Blamark	31	Future Wars	34
Black Gold	27	Game Over II	24
Black Lamp	15	Games Galore	27
Black Tiger	27	Gold Rush	26
Blitzkrieg May 1940	34	Golden Axe	38
Blue Angels	34	Grand Monster Slam	25
Borodino	41	Grenlins II	27
Botics	29	Grid Iron	21
Brain Blaster	23	HATE	24
Bride of the Robot	25	Hard Drivin' II	37
BSS Jane Seymour	38	Harley Davidson	41
Cadaver	31	Harmony	28
Captive	37	Harrier Combat Simulator	14
Car-V-Up	31	Heat Wave Boat Racing	28
Cardinal of the Kremlin	33	Heavy Metal	27
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Cartoon Capers	25	Highway Patrol 2	34
Chamber/SCI Mutant	31	Hillstar	38
Chaos Strikes Back	25	Horror Zombies From Crypt	37
Chaos Strikes Back Editor	19	Hot Rod	34
Chaos/Dung Master Twin Pk	39	Hound of Shadow	29
Checkmate	37	Hoyles Games I	23
Chess Simulator	34	Hoyles Games II	23
Chicago 90	25	Hunt for Red October	23
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Chuck Yeager Adv. Flight Sim	29	Imperium	36
Cloud Kingdoms	34	Infection	31
Crown-O-Mania	20	Infogrames Tri-Pack	34
Clue - Master Detective	27	Ironman (Super Off Road)	28
Code Team	46	Jack Nicklaus Golf	34
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Coin Op Classics	23	Jug	18
Columels Bequest	38	Kick Off	27
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Conqueror	34	King Quest 4 Perils Of Rose	39
Conquest of Camelot	39	Klax	26
Corporation	37	Knife	44
Curse Of Ra	34	Knights of Legend	37
Cyberball	27	Krypton Egg	24
Damocles	29	Last Ninja II	32
Dan Dare III, The Escape	27	Last Starship	24
Days of the Viper	29	Leaving Teramis	27
Day of Thunder	34	Legend Of Djel	34
Debut	34	Legend of Faerghail	27
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Deluxe Paint	81	Legend of the Lost	34
Dinosaur	26	Leisure Suit Larry 3	39
Double Dragon II	25	Life and Death	38
Dragon Scape	24	Loom	45
Dragonflight	39	Lost Dutchman Mine	31
Dragons Breed	37	Lost Patrol	38
Dragons Lair	37	Mad Professor Mariarti	27
Dragons of Flame	19	Magic Fly	32

Manhunter 1 New York	31	Manhunter 2 San Francisco	31
Mean Streets	36	Mig 29 Fulcrum	54
Mirror Image	19	Murders In Space	31
Narc	37	New Zealand Story	27
Night Breed	29	Night Hunter	33
Nitro	26	North and South	31
Oil Imperium	31	Onslaught	31
Orbiter	25	Oriental Games	34
Overlord (Supremacy)	37	Pang	34
Paradroid 90	34	Paris Dakar 90	37
Pepsi Challenge	25	Pictionary	31
Pipe Dream	28	Planet of Lust	34
Plotting	31	Pool of Radiance	37
Populus, The Promised Land	19	Powermonger	39
Powerplay	25	Prince	31
Pro Soccer	26	Pro Tennis Tour	25
Projectyle	29	Pub Games	29
Pursuit to Earth	22	Puzzle	37
Rainbow Islands	29	Rainbow Warrior	31
Rogue Trooper	34	Rick Dangerous II	37
Roll Out	25	Rok's Drift	31
Rotox	32	Roy of the Rovers	25
Scrabble	27	Sex Vixens from Space	29
Shadow of the Beast	31	Shark Attack (Ultimate Golf)	27
Sherman M-4	27	Shoot 'em Up Construction Kit	37
Sidewinder	19	Silpheed	22
SimCity	34	Sleeping Gods Lie	31
Sly Spy	31	Soldier 2000	28
Space Ace	37	Space Ball	25
Space Quest 3	31	Star Blaze	24
Star Wreck	25	Starlight	38
Stash	19	Stellar Crusade	42
Street Hockey	31	Strider	25
Stunt Track Racer	26	Super Puffy's Saga	25
Super Scramble	25	Superbike Simulator	39
Supreme Flight Command	37		

Productivity

1st Word Plus 3.14	62	Home Accounts	31
Access	18	Hotwire Plus	39
Base Two	39	Image Cat	17
Becker Cad	71	Interlink ST	28
Best Business Manager 2.0	185	K-Graph 3	49
C Source Debugger	44	Keyboard Controlled Seq.	138
Calamus	174	Laser C	115
Calamus Font Editor	63	LDW Power Spreadsheet	112
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Card File	23	Mark Williams C	109
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Cleanup ST	24	Midimax	31
Code Keys	26	Mug Shot	27
CodeHead Utilities 3.0	22	Multi Desk	19
Complete Artist	31	Multiviewer Graphics (MVG)	39
Critic Bar Code Plus	155	Music Studio 88	37
Cyber Control 1.1	34	Neodesk CL	19
Cyber Paint	49	Neodesk III	47
Cyber Print	31	Pagestream	125
Cyber Sculpt	57	PC Board Designer	122
Cyber Studio/CAD 3D	55	Personal Pascal	74
Cyber Texture	33	Phaser 4.0	58
Data Manager ST	51	Prospero C	98
Day By Day	37	Quick ST 2	16
dBMan V 5.2 w/Compiler	108	Quick Tools	19
DC Desktop	25	Replay Professional	194
DC Utilities 2.0	25	Script	49
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Diamond Back II	37	Sketch	62
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DLM (Disk Label Maker)	12	Superbase Professional 3.0	220
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E-Type	49	That's Wright	142
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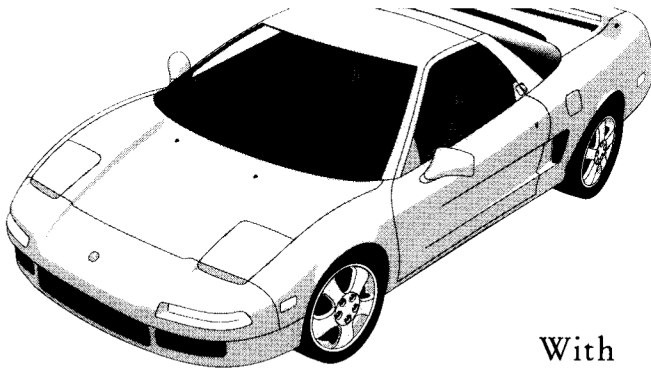
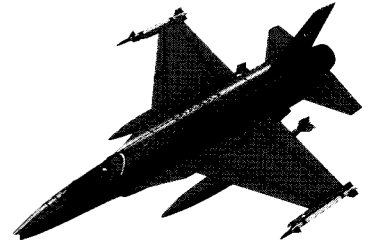


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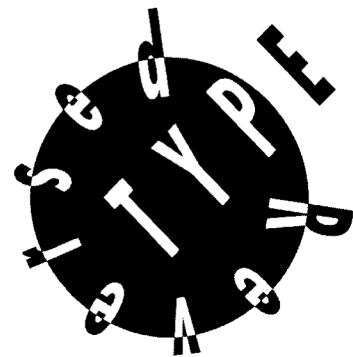
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