San Leandro Computer Club Journal
August 1994

El Presidente

*

This is how I was addressed in a message on my answering machine after winning the June election. It was beginning to sink in — I was actually going to have to stand up in front of a bunch of angry 8 and 16 Bit users and explain why I spend all my time flying around a PC, when I should be a dedicated Atarian and use Calamus on a Falcon.

Actually, that first meeting last month wasn't so bad. I was dying to demo my latest obsession, F-15 Strike Eagle III, but I couldn't figure out how to pass it off as pertinent to an Atari metting. So, I settled for keeping the crowd calm by having other members get up and do all the talking.

It's only a matter of time before I demo flight Simulator II, the 8-Bit version that got me addicted to this stuff, so be prepared (bring your Dramamine). I still fly it to keep current and when you go back to a 486 PC after that, you realize what you keep spending all that money for.

I'd like to thank everyone for their support and friendship and especially the 2 Bobs, the 2 Jims, and Lyle (and Earl) for their technical support in times of crisis.

Regards, Robbie Bridges

* A picture of El Presidente was not available, so we substituted a picture of El Vice Presidente. *Your Editor*

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An independent, money losing organization of Atari computer users. Membership, at $20, doesn't buy you a whole lot, but the price has never been raised. Call an officer to join.

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Journal Staff

Editor	Steve Goldstein	(408)257-2058
8-Bit Editor	Bob Woolley	(510)865-1672

Contents

"I Didn't Do It,
I Wasn't There,
And Besides
I've Got An Alibi.

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8-Bit West	**(510)895-8022**
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August

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	Main Meeting 8:00 PM	3	4	5	6
7	ST SIG Meeting 8:00 PM	9	10	11	12	13
14	15	PC SIG Meeting 8:00 PM	17	18	19	20
21	22	23	24	25	26	27
Journal Deadline 12:00 PM	29	30	31			

OUR LATEST 8-BIT D.O.M.

by Bob Scholar SLCC 8-bit Software Chairman

SLCC1208 - AUGUST 1994

GENERAL COMMENTS

This month's SLCC Journal carries (with this page) the complete text of Dave Paterson's HANDLERS.TXT article, and p.32 of "SLCC's Program Library". (Dave's TUTorial article is also on our DOM disk; I found it in the MACAM Journal Disk dated 4/92.)

Jim Hood said, at the July 5,1994 meeting, that he still hopes to print an August issue of the new AC! (As of 7/13; that's all I know!)

D.O.M. SUMMARY

This DOM has 3 Games & 1 G/DEMO; 2 DEMOs; 1 UTILity; & 1 TUTorial TeXt file. Boot the front WITH BASIC and the back WITHOUT!

CONTENTS- DISK #1208:-

Front:-

*SLCC1208.DOC	028	TITLE	011
AUTORUN .SYS	002	MENU	034
DOS .SYS	037	ALPHABET.BAS	031
CRIBBAGE.BAS	092	ELECTRA .BAS	117
GR3DLOAD.BAS	012	GRAPH3D .BAS	087
HANDLERS.TXT	053	TRAIN1 .BAS	081
TRAIN2 .BAS	121	001 FREE SECTORS	

Back:-

[Boot without BASIC and select from the menu presented. This side is in ENHanced density!!]

MBLAST .COM	782	SMALL .COM	218
011 FREE SECTORS			

PROGRAM DETAILS

ALPHABET.BAS- there are many disk DIRectory UTILities which sort the on screen display alphabetically. This one is different. It sorts the DISK DIRectory, and then actually rewrites it. It then revises the last 3 bytes of each data sector to agree with the new file numbers assigned. This takes about 2-3 minutes (for single density disks; 3-4 for Enhanced density). The disk thus produced has a DIRectory in 'alfa' order. This could be handy for 'permanent' file disks (UTILity, etc. collections). It's by Craig J.Stadler - from ANALOG #73 (6/89).

CRIBBAGE.BAS- originally a commercial Game by Thorn EMI,(C) 1980; it is on GENIE as File #6678. It has no DOC, but the rules are standard. SLCC #0909 has a Cribbage Game which gives the rules (if you don't have Hoyle). This version plays a good game,- even though a little slow. I suggest that you type YES when it asks if you wish to play "Muggins" (it's more fun!)

ELECTRA.BAS (Electra-Ball)- is for two players, with J/Ss. A futuristic sports Game- each team has a goal and deflector panels scattered around the playfield. Try to set your panels to deflect the ball into your opponent's goal. Players pre-select the winning score- be first to make it! By Frank Martone;- from ANALOG #70 (3/89).

GRAPH3D.BAS (you Run GR3DLOAD.BAS) creates 3D ('fishnet') objects in GR. Mode 8. It does a sample graph & has self explanatory(?) menu choices. If you'd like more info, the article has lots of fine explanations & tips. It gives a very clear description of all the parameters used (with charts) and gives 10 or 11 lists of functions and sizes, etc. to graph as examples. By Paul Chabot- from ANTIC (10/85).

HANDLERS.TXT by David Paterson is a TUTorial from MACAM's 4/92 disk.

Train Crazy is in two files. Run TRAIN1.BAS and it will automatically load TRAIN2.BAS (there's no DOC). For 1 player with J/S. Oscar the Ostrich has 5 lives. He jumps to collect the diamonds. He must avoid the tunnels; the chains; running out of energy; or knocking himself out when jumping. By Colin Faller- from ANALOG #63 (7/88).

MegaBLAST.COM is a Freeware Game for 2 players. Boot without BASIC and use its loader (it takes awhile). By Torsten Karworth:- great sound & many novel GRaphics. It was DisCoMmed with SMALL.COM in GENIE's File #6343.

SMALL.COM - is small, but a very impressive GRaphics DEMO from ABBUC; the German Atari Club. Load as above.

DEVICE HANDLERS

by David A. Paterson

From MACAM Disk dated 4/92 [& SLCC #1208]

Everytime you type, save, load, print, format, or do any other operation with your Atari 8-bit computer, you unwittingly use device handlers and the CIO system. This article isn't intended for the beginning BASIC programmer, but rather for the more experienced users looking for information about the inner workings of their system.

The Central Input/Output (CIO) utility was a brilliant innovation by Atari in their first computers. This system, which used a standard method to "talk" with all the peripherals attached to the system; permits you to read or write to just about any device which is hooked up to the system, provided a proper handler for that device is provided. There are five handlers built into your computer:

S: the screen. You can write to it; or read from it (with LOCATE in BASIC).
K: the keyboard. You can only read from the keyboard. This device does not display what has been read from the keyboard.
E: the editor. This is a combination of the S: and K: devices, reading information from the keyboard and echoing it to the screen. You can read or write to this device.
P: the printer. This is a write-only device, and sends data to your printer.
C: the cassette, all but forgotten now. You can read or write to it.

Any other handlers, including the Disk handler, have to be loaded into the computer when it powers up. The computer will read in a small piece from D1: (that much code is built in) but the whole disk handler has to be loaded in.

A Handler is made up of three parts. First is an entry in the Handler Address Table (HATABS). This table resides in memory locations 794 to 831, space for up to 12 handlers. Since there are already five built in, that leaves seven open to use. Usually, a handler program begins by looking at HATABS and finding the first blank entry. Each entry is three bytes long; first of all is the identification letter for the device. The next two bytes are the address of the device's handler table.

The second part of the handler is, of course, the device handler table. This table is a series of addresses that tell the system where to look if it has to perform certain actions. There are six routines in the table, in this order:-

OPEN - start I/O with the device.
CLOSE - end I/O with the device.
GET - seek one byte of information from the device. This information will be put into the accumulator.
PUT - send one byte of information to the device. The accumulator holds the byte to be PUT.
STATUS - test the device's current state.
SPECIAL - any other command(s) that this device has.

Each of these entries is two bytes long, and is calculated by taking the address of each routine MINUS one. Why minus one? The system works by tricking the 6502 inside your computer. The two addresses are PusHed from the Accumulator (PHA) onto the stack, then a ReTurn from Subroutine command (RTS) is executed. This command resumes the program at the address at the top of the stack PLUS one. So then,- subtracting one compensates for this.

The last three bytes in the handler are a JMP INIT command, where INIT is the initialization routine for the device.

The final portion of the handler is the commands themselves. These are the commands executed when you OPEN, or CLOSE, or whatever a channel to the device. Before returning from these routines, you must put a value of 1 in the Y-register which indicates that the operation was conducted successfully. In the case of the "SPECIAL" vector, you might have more than one possible special function. The Disk handler, for example, has many "special" functions like LOCK, UNLOCK, ERASE, and FORMAT. The SPECIAL routine has to determine which has been called and go to the appropriate location.

Since the vector tables for all the devices (including the five in ROM) are located in RAM memory, it's possible to change the existing handlers. Atari's XEP-80 device does just that. The XEP handler looks for the S:, E:, and P: handlers, and re-routes their output to the joystick port where the device is attached. Other patches have been written to add extra features to other handlers as well. (more on that later)

This month's(!) MACAM Journal has(!) a bunch of handlers on the program side. They've been taken from Antic and Analog issues. There's a bibliography included at the end of this article if you want more information.

The first handler is the NULL (N:) handler. It's from Antic, and installs a device called N:. This device will take data, and do nothing with it (sort of like a government handler). Running the program NULLHAND.BAS will install the handler. NULLHAND.M65 is the source code.

The next handler is a patch to the P: device. From Antic as well, this handler intercepts the ATASCII character graphics being sent to the printer and replaces them with graphics bytes so that you can actually see them in the listing. PRHAND.BAS will create a file to install this handler patch. The source code is in PRHAND.M65.

The V: device handler comes from ANALOG. This uses your high memory (not extended banks) to store programs or data. The program V.BAS will create a program called V.OBJ which you can load from DOS.

Please note that the three programs just listed CANNOT be run at the same time, as they all use the same memory (page six).

The final handler is the G: device, originally from Analog as well. In short, it's the most useful printer utility that you'll ever see. Written by Charles F. Johnson, of CodeHeads fame, it lists programs, dumps graphics, uses custom character sets, supports multiple sizes of graphics... in only 2.5k of memory. GDRIVER.EXE is the ready-to run version, and GDRIVER.M65 is the source code. It works with Epson compatible printers, and only with printers hooked up to the SIO port (sorry, MIO & Black Box users, and those with joystick port interfaces). [See SLCC disk #0906 for more info on G:'s features. - rrs]

BIBLIOGRAPHY

Antic Vol.8 No.2 "Customizing the Atari Operating System Device Handlers" by Bob Martin and Martin Mercorelli.

Analog #31 "V: A Memory Storage Device" by Philip Altman

Analog #35 "G: A Printing Device for Epson / Gemini Printers" by Charles F. Johnson

Atari System Reference Manual by Bob DuHamel

VOL#	PROG/FILE ID	DESCRIPTION	TYPE	SOURCE	DATE	SECTORS
0905	CULLDECK.BAS	Solit. & DOC- A.Miller	GAME	ANTIC->	->6/90	61
0905	FILCOMP.BAS	Compare files; v. fast	UTILITY	ANTIC->	>12/88	26
0905	GEMINI.BAS	Exc. game & good DOCs.	GAME	START->	->2/91	127
0905	HIROLLER.BAS	1-8 Players,- w/instr.	GAME	ANTIC->	->6/90	55
0905	JUKEBOX.EXE	"AMP" Player & DOC.	MUSIC	START->	->2/91	46
0905	8 AMP sel'ns	ELEANOR, JEDI, TRACES,				
0905		BOLERO, CASCADES, BEE,				
0905		WISHYOU, & WEWISH.	AMP MUS	ANTIC	Var.	438
0905	CONVERT.BAS	Conv. AMS to AMP files	UT/MUS	ANTIC->	>12/88	19
0905	SHIFTER.BAS	Expl. in TRANSPOZ.DOC	MUSIC	ANTIC->	->6/90	19
0905	TRANSPOZ.BAS	Explained in DOC.	MUSIC	ANTIC->	->6/90	32
0905	REFORMAT.CTB	Ref. text (CompiledTB)	UTILITY	Andrews		26
0905	REFORMAT.DOC	Exc. DOC for above.	UTILITY	Andrews		61
0905	RUNTIME.COM	Runs REFORMAT.CTB.	TB UTIL			88
0905	UTIL.EXE	IBM<->ATARI files +DOC	UTILITY	Marslet		141
0905	VSQDEMO.EXE	3D Tetris; + DOC, etc.	GAME	J.Glenn		153
0906	BONK.BAS	Arcade action-(loader)	GAME	ANALOG>	>10/85	76
0906	CHECKERS.OBJ	Many options & modes.	GAME	ANTIC->	->4/90	133
0906	GOLDMINE	(5 files) Run TITLE.GM	G/T.Ad.	ANTIC->	->4/90	431
0906	GOLFSOL1.COM	Solitaire & DOC.	GAME	D. Elek		58
0906	G.OBJ(& BAS)	Super print UT w/DOC.	UTILITY	ANALOG>	>10/85	107
0906	HIDE.BAS	Logic game, with J/S.	GAME	ANALOG>	>10/85	69
0906	TRUCHET.BAS	TRUCHET.DOC explains.	DEMO ++	ANALOG>	>12/89	66
0906	TRUCHET2	Sequel to above.	DEMO	C.NOTES	->4/91	10
0906	4 AMP sel'ns	See May Jukebox player	MUSIC		6-1991	286
0907	BAKER.BAS	Solitaire; 3 ways; DOC	GAME	ANTIC->	->3/89	129
0907	DISPOZUN.BAS	Huge PLANETFALL clone!	G/T.Ad.	ANTIC->	->3/89	955
0907	FINANCE.BAS	DOC explains uses.	UTILITY	ANTIC->	->4/90	85
0907	SHUTDOWN.BAS	Fast action; has DOC.	GAME	ANTIC->	->4/89	121
0908	* 2 Disks re	TURBO-BASIC, & modular	program	writing	8/91.	*
0908	AUTORUN.SYS	the new TB; N.American	version	per DOC	3/90.	145
0908	TURBODOC.TXT	adds to older DOC (361	sects.)	for new	total=	403
0908	COMPILER.COM	Update plus .TXT 035 &	RUNTIME	COM 088	total=	203
0908	Tutorial for	modular programming; &	example	of use.		
0908	A library of	38 programming modules	LISTED	to disk		238
0908	ARRAY.TXT	Tutorial on programs &	Arrays.			83
0908	SORTING.TXT	Tutorial on Sorting.				103
0908	Fonts, DEMOs	& auxiliary programs.				
0909	ANTICOPY.BIN	Multiple copier + DOC.	UTILITY	ANTIC->	->1/88	55
0909	BIGFOOT.BAS	Graphics/sound; short.	DEMO	ANTIC->	->1/88	11
0909	BOUNCE.BAS	BREAKOUT?(by Rassilon)	GAME	ANTIC->	->1/88	19
0909	CRIBBAGE.BAS	Learn the rules & play	GAME	ANTIC->	->5/89	148
0909	HANDCAR.BAS	Charac. set animation.	DEMO	ANTIC->	->1/88	9
0909	PEGBOARD.BAS	Peg solit. by Rassilon	GAME	ANTIC->	->1/88	24
0909	PS.COM	Hardcopies screen. DOC	UTILITY	c.f.	9-1991	18
0909	ROLLOUT.BAS	Yahtzee(?) by Rassilon	GAME	ANTIC->	->1/88	33
0909	ROULETTE.EXE	Las Vegas style. +DOC.	GAME	ANTIC->	->1/87	100
0909	SUNSET.BAS	Good color; short pgm.	DEMO	ANTIC->	->1/88	7
0909	TOPSHELF.BAS	Data base in BASIC.	UTILITY	ANTIC->	->1/88	158
0909	BRIK.BAT	Back.- Super BREAKOUT+	GAME	ABACUS	9-1991	ALL

Category 26, Topic 2, Message 2
Wed May 04, 1994
STEVE-J [EeEckyThump!]
at 06:47 EDT

Okay, here's the actual press release for Sigma's Jaguar card for IBM clones:

For Immediate Release

Contact:
Lynn Thompson, 408/764-0740
Karen Magill, 617/494-8202
Cunningham Communications, Inc.

Bill Rehbock, 408/745-2000
Atari Corporation

ATARI and SIGMA DESIGNS PARTNER to DELIVER JAGUAR for the PC

SAN JOSE, Calif. – May 3, 1994 – Atari Corporation (AMEX: ATC) today announced that it has exclusively licensed Jaguar technology to Sigma Designs (NASDAQ: SIGM) to deliver PC cards incorporating the award-winning Jaguar 64-bit technology with Sigma's Reel-Magic(TM) full-motion video capabilities. This deal will expand Jaguar's market reach by allowing more than 10 million users to play Jaguar software titles on their IBM-compatible personal computers by year's end.

"Atari will once again jump ahead of the market by bringing the world's most advanced game technology to a new group of consumers in record time," said Sam Tramiel, president of Atari. "Knowing there would be great demand for Jaguar on personal computers – we designed the system to talk easily to the leading computer architectures. This has allowed us to move quickly to partner with Sigma Designs to make this happen before Christmas."

"We are pleased to join Atari in its mission to expand the industry standards for video game play," said Julien Nguyen, vice president of engineering and chief technical officer of Sigma Designs.

"Jaguar's 64-bit technology will be extremely attractive to the MPC customer base of more than 10 million users. By combining Sigma's Moving Picture Experts Group (MPEG) technology with Atari's

3D animation, we look forward to bringing the hottest video game technology and software titles to the desktops of users worldwide."

Sigma Designs, headquartered in Fremont, Calif., is a leading manufacturer of high-performance multimedia computer products and document imaging display solutions. With the the release of its ReelMagic MPEG controller in October 1993, Sigma Designs redefined affordable video playback for the PC. ReelMagic allows users to experience a new generation of realistic entertainment, education, training, and business presentation software titles with full-screen, full-motion video and CD-quality sound. All Sigma Designs products are sold worldwide through a network of dealers, distributors and system integrators.

Atari Jaguar is the world's first 64-bit interactive multimedia home entertainment system and is the only video game system manufactured in the United States. Jaguar, the most powerful multimedia system available, was recently named the industry's "Best New Game System" (*Video Games Magazine*), "Best New Hardware System" (*Game Informer*) and "1993 Technical Achievement of the Year" (*DieHard GameFan*). Jaguar also recently was given the European Computer Trade Show Award for "Best Hardware of the Year."

Atari Corporation, based in Sunnyvale, Calif., manufactures and markets 64- bit interactive multimedia entertainment systems, video games and personal computers for the home, office and educational marketplaces.

All trademarks are the property of their respective owners.

Category 26, Topic 2, Message 3
Sat May 07, 1994
STEVE-J [EeEckyThump!]
at 04:21 EDT

The basic MPC requirements are:

MPC-1
==========
386SX or higher processor
Windows 3.1
Sound card
CD-ROM drive

MPC-2
==========
486SX or higher processor
Windows 3.1
16-bit sound card
Double-speed CD-ROM drive

By the way, was the following press release ever posted here?:

ATARI SELECTS WAVEFRONT'S GAMEWARE AS WORLDWIDE GAME DEVELOPMENT SOFTWARE FOR JAGUAR SYSTEMS

Santa Barbara, Calif., April 25, 1994 - Wavefront Technologies, Inc. and Atari Corporation have announced a worldwide agreement making

Wavefront's GameWare the exclusive game graphics and animation development software for the Atari Jaguar system. The GameWare family is a comprehensive set of 2D and 3D tools that incorporate a wide range of capabilities specifically geared towards game authoring and development needs.

Under the terms of the agreement, Atari will itself use GameWare for internal content creation and will advise third-party developers to use GameWare as the image and geometry authoring tool for the new 64-bit Jaguar game system. Wavefront in turn will provide special pricing to Atari Authorized Developers wishing to purchase GameWare licenses.

"Jaguar's performance and the realism delivered by GameWare provide our developers with a significant advantage in maximizing the capabilities and potential of our 64-bit design," said Bill Rehbock, vice president of Software Business Development for Atari. "Visual realism is central to Jaguar's capabilities and it has the rendering speed and throughput to drive realistic character animation at a price point that is viable for the home market."

"Based on our extensive evaluation, Wavefront's state-of-the art game authoring tools are the best software for our developers to really demonstrate the Jaguar's capabilities. Wavefront's easy-to-use 3D animation and modeling tools will help artists focus on creative, show-and-tell story elements instead of the mechanics needed to implement special effects."

"The Atari Jaguar represents the first of the next generation game consoles that will revolutionize the industry with its real-time 3D graphics capabilities," said Bruce Sinclair, electronic games marketing manager for Wavefront. "Atari's selection of GameWare as its exclusive authoring tool will showcase our product with the industry's leading developers in creating some of the most visually stunning games to date."

GameWare is Wavefront's graphics software package tailored to meet the specific needs of entertainment content developers. GameWare runs on Silicon Graphics workstations and provides the graphics tools needed to create games containing realistic 3D objects and terrain, 3D synthetic actors with realistic motion and stunning special effects.

GameWare can generate images and geometry suitable for any game platform. An open architecture allows developers to integrate their existing software tools with GameWare. Hyper Plug-ins available from Wavefront allow enhanced functionality, including GameWare Composer for 2D special effects and color reduction, and GameWare Dynamation for

creating special effects such as explosions, fire, smoke and collisions.

Since its introduction at the Consumer Electronics Show in January '94, GameWare has quickly been recognized as the graphics tool of choice among leading-edge game developers. Atari joins the rapidly growing list of gaming companies using Wavefront software including: Acclaim, Accolade, Arc Development, Argonaut Software, CAPCOM, Core Design, Electronic Arts The Learning Company, Midway Manufacturing, NAMCO, Ocean Software, SEGA, SNK, Spectrum Holobyte, Taito, Tiertex, US Gold, and Williams Entertainment.

Atari Jaguar is the world's first 64-bit interactive multimedia home entertainment system and is the only video game system manufactured in the United States. Jaguar was recently named the industry's industry's "Best New Game System" (*VideoGames Magazine*), "Best New Hardware System" (*VideoGames Magazine*), "Best New Hardware System" (*Game Informer*) and "1993 Technical Achievement of the Year" (*DieHard GameFan*).

Wavefront Technologies, Inc., founded in 1984, develops, markets and supports a complete line of workstation-based three-dimensional and two-dimensional computer graphics imaging and animation software products for professional users in the entertainment and industrial markets. The Company's entertainment customers use the software to create images and special effects for movies, television programming, advertising and electronic games. The Company's industrial customers use the software to create images for enhancing and marketing products, visualization of design appearance and function, presentation of complex project concepts and illustration of engineering and scientific phenomena that would otherwise be difficult to understand.

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Also, Wavefront has a Web Server, and its URL is:
http://wavefront.wti.com

San Leandro Computer Club

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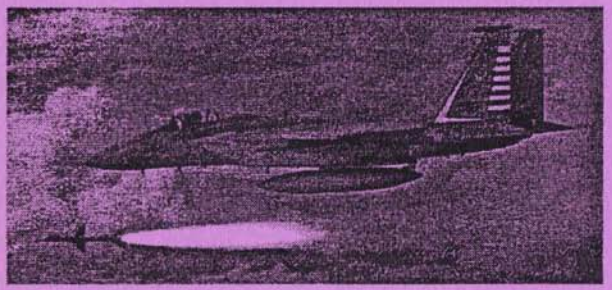
First Class Postage

General Meeting • *August 2, 8:00 pm*
San Leandro Community Library • 300 Estudillo Avenue



First Class Member