



ATARI.RSC

THE RESOURCE FILE

The Atari Developers Resource

JUNE 1990

A NEW PROGRAM A NEW NAME

We've come a long way in the last six months. The Atari developers' program is responding more quickly to your needs, and, in some cases, anticipating them. We've got a long way to go, but we are pleased with the progress we have made. Several months ago we decided the newly revived program needed an official name to symbolize our new partnership with you. We realized that our creativity could never surpass the combined inventiveness of all of you, so we ran a contest.

THE REALLY GREAT NAME CONTEST

The contest gave us exactly what we wanted, Really Great Names. We studied all the entries carefully (a truly enjoyable task). We were looking for something short and sweet which would characterize our new partnership and be uniquely Atari. Alex Leavens, a long time Atari developer, dating back to the eight bit days, suggested "The Developer Resource Group." Everybody here loved the idea of "Resource" and, surprisingly, no other developer suggested it (we didn't think of it either).

Alex's idea became the core of our new name: ATARI.RSC (pronounced

Atari Resource). It is also the inspiration for our Newsletter's new name, The Resource File. Congratulations, Alex! You are the winner of a CDAR504 CD-ROM player.

WELCOME PORTFOLIO DEVELOPERS

Starting with this issue, we're sending The Resource File to Portfolio

developers as well as ST-TT developers. We have a special section for Portfolio, but we encourage everybody to read every section. There're interesting things to learn throughout every issue. Perhaps you'll see something inviting on the other platform and develop an exciting, innovative, and profitable product for it.

documenting changes posted on GENie. Some developers are still trying to use the old, unreadable, xerox listings from five years ago. That's just not acceptable and we've set out to correct it.

For the past several months, we've been including Developer Kit

and scribbled notes

SO FAR...
Charles Cherry

UPDATE YOUR DEVELOPERS KIT NOW!

The unfairly-maligned ST Developers' Kit has been regularly updated and corrected over the years. It is laser-printed and quite readable. It has been thoroughly debugged and is complete, com-

Inside This Issue:

ATARI SOFTSOURCE™	8
BITS & BYTES.....	3
CALENDAR.....	2
MEGATALK.....	4
PORTFOLIO.....	10
PORTFOLIO Q & A.....	11
PORTFOLIO ONLINE.....	12

THE RESOURCE FILE

**CEO, PRESIDENT,
ATARI CORPORATION**
Sam Tramiel (408) 745-2000

VICE PRESIDENT, APPLICATIONS
Antonio Salerno (408) 745-2192

ST-TT APPLICATIONS MANAGER
Charles Cherry (408) 745-2082

**PORTFOLIO
APPLICATIONS MANAGER**
Ken Jacobsen (408) 745-2025

PORTFOLIO PRODUCT SPECIALIST
Mike Pooler (408) 745-2025

DEVELOPER TECHNICAL SUPPORT
J. Patton (408) 745-2135

DEVELOPER ADMINISTRATOR
Gail Johnson (408) 745-2568

**ATARI SOFTSOURCE™
ADMINISTRATOR**
Dan McNamee (408) 745-6833

MARKETING ASSISTANT
Kimberly Metcalf (408) 745-2085

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Calendar Of Events

JUNE

June 2-5, Illinois

CES (Consumer Electronics Show), Chicago, Illinois. For more information, call (202) 457-8700. Atari will be attending.

June 3-6, Georgia

COMDEX Spring - Atlanta, Georgia. For more information contact: The Interface Group, (617) 449-6600.

June 5-8, Florida

COM 90 - Sponsored by the In-Plant Management Association, Walt Disney Hilton, Orlando, Florida. Contact: IPMA, 1205 W. College Avenue, Liberty, MO 64068; (816) 781-1111.

June 16-18, Illinois

NAMM (National Association of Music Merchants), McCormick Place, Chicago, Illinois. For more information, contact Dominique Agnew, (800) 767-NAMM. Atari will be attending.

June 24-28, Illinois

Syntopican XVIII office systems technologies conference, sponsored by the Association of Information Systems Professionals, Hyatt Regency Hotel, Phoenix, Arizona. Contact: AISP, Syntopican XVIII, 104 Wilmot Road, Suite 201, Deerfield, Illinois. (312) 940-8800.

AUGUST

August 24-26, West Germany

Annual Atari Messe (Fair) in Dusseldorf. Over 200 exhibitors and 45,000 visitors expected. For more

information, contact Thomas Huber, Atari Germany GmbH, Postfach 1213, D-6096 Raunheim, West Germany, 49-6142-2090, FAX 49-6142-209180.

SEPTEMBER

September 6-10, Nevada

Cinetex '90, International Film and Television Festival. The show will be held at Bally's Casino Resort, Las Vegas, Nevada. It will be the new showcase for the entertainment industry -- displaying everything from computer/videodisc software to CD-ROM, from digital image manipulation systems to user friendly PCs. For more information contact: The Interface Group (617) 449-6600.

September 15-16, California

So. California Atari Computer Faire, Version 4.0b. The show will be held at the Glendale Civic Auditorium in Glendale, California. General admission is \$5.00. If you are unable to attend, you are invited to give copies of your product as promotional items. Registration needs to be completed by August 15th. For exhibiting information or any questions, please contact: John Tarpinian at (818) 246-7286.

UPCOMING EVENTS

If you hear of any upcoming events, please submit them in writing to:

Atari Corporation
P.O. Box 3427
Sunnyvale, Ca 94088-3427
Attn: Kimberly Metcalf ♦

Press Database Update

Kimberly Metcalf

Last month we sent you the Press database with mostly U.S. contacts. Enclosed with next month's newsletter will be an updated version of the Press database. It includes press contacts throughout the world.

We also asked that you send us additional contacts so we would include them in our database as well. Please make an effort to do this so that we can have the most effective listing possible.

Atari subsidiaries are very excited about this project and are willing to help in any way they can. I would like to thank Atari Australia, Canada and Switzerland for responding to our request so quickly. These contacts are only the beginning in the relationship we hope to strengthen between our subsidiaries and Atari Partners.

This database is a very valuable tool to reach your customers around the world. Through this newsletter and the database, your products can obtain worldwide exposure and sales.

Thanks to you and Atari Subsidiaries, we can move forward to achieve our goals! ♦

So Far....

updates with the Newsletter. We'll continue to do that and we want you to take the time to read the updates and post them to your kit. That keeps you updated from this point forward, but you still need to update the changes made earlier. We've now extensively documented the contents of the kit, identifying the latest version of every page in it. That listing is included for ST developers with this issue of The Resource File. It is formatted as an order form, so you can use it to order the parts of your kit which are missing or need updating. You can replace your entire kit, or get additional copies for your programmers, for just \$75.

Please take the time now to check

your kit and order the missing parts. This special update opportunity will only be offered this month.

MetaDOS

MetaDOS is the TOS extension used by the CDAR504 CD-ROM player, but it has implications far beyond CD-ROMs. With MetaDOS, you can define a driver for any kind of storage medium. This means that it has significance for those working with networking or unusual storage devices. MetaDOS will be distributed to all developers as soon as it is finalized. In the meantime, those of you who have immediate need for MetaDOS can order it now from Gail Johnson. There is no charge. ♦

BITS AND BYTES

PROGRAMMERS AVAILABLE

Freelance Assembly and C programmers desire contract and/or royalty work. Interested parties should contact JonesWare at 95 Franklinton Road, Dillsburg, PA 17019.

THE GLENDALE SHOW

The Southern California ATARI Computer Faire, Version 4.0b (aka The Glendale Show) is scheduled for September 15 & 16, 1990. The show is put on by local computer clubs. This is the fourth show the clubs have put on. You'll find more information and an Exhibitor's Reservation form on a separate piece of paper with this issue of The Resource File. If you have any questions about the show, feel free to

contact John King Tarpinian, Faire Chairperson, at (818) 246-7286.

GENIE CONFERENCE

We know that you have wanted to have an on-line conference for some time now. We've wanted to have one too, but other things have taken precedence. However, the Independent Association of Atari Developers (IAAD) has convinced me that we need to give on-line conferencing a higher priority. Therefore, we will have an on-line conference on June 7, 1990, at 7:00 PDT. It will be in the ATARIDEV RT on GENIE. We'll see you all there. We'll try to have conferences on a regular basis in the future. ♦

MEGATALK

by Douglas N. Wheeler,
Gadgets by Small, Inc.

This article is for your information and evaluation. It is not necessarily endorsed by Atari Corporation.

The Gadgets by Small MegaTalk board is a half-length Mega expansion card that gives the machine two additional high-speed serial ports. These ports are compatible with those on a Macintosh Plus and can be used by the Spectre 128/GCR for direct AppleTalk/LocalTalk communications or for running Mac MIDI applications. In the Atari's native mode, they can be used like the RS-232 port, with the exceptions that a Mini DIN-8 to RS-232 cable is required, and the ports can operate at much higher speeds than the RS-232 port.

Included with the MegaTalk board is BIOS driver software which, when placed in the AUTO folder (or run from the desktop), provides the necessary routines to use the serial ports using standard BIOS and XBIOS calls.

TOS COMPATIBLE BIOS/XBIOS CALLS

The following BIOS calls can be used:

- Bconstat - for determining input status
- Bconin - for receiving incoming data
- Bcostat - for determining output status
- Bconout - for sending outgoing data

The following XBIOS calls can be used:

- Rscnf - for configuring the port
- Iorec - for locating the I/O buffers

These calls are used the same as for the RS-232 port with the following exceptions:

BIOS CALLS

When using TOS 1.2 or above, the MegaTalk port A is mapped to BIOS device 6 and port B is device 7. With any version of TOS, you can use device \$81xx for port A and \$82xx for port B.

RSCONF

Since the Rscnf call does not allow a device to be specified, ORing \$8100 or \$8200 to the speed parameter will cause the call to configure the MegaTalk port A or B respectively. Once Atari finalizes the new Bconmap/Bconctl call(s), we will be supporting it to provide Atari TT compatibility.

Since the MegaTalk board supports higher baud rates, there are new speed values for some of the other speeds. The complete list of speeds is as follows:

<u>RSconf value</u>	<u>/16 baud rate</u>	<u>/1 baud rate</u>	<u>Percent error</u>
0	19200	307200	
1	9600	153600	
2	4800	76800	
3	3600	57600	
4	2400	38400	
5	2000/1986.21	32000/3177931	0.6-9%
6	1800	28800	
7	1200	19200	
8	600	9600	
9	300	4800	
10	200	3200	
11	150	2400	
12	134.5/134.42	2152/2150.76	0.0-6%
13	110/110.03	1760/1760.46	0.0-3%
14	75	1200	
15	50	800	
16	57600	921600	
17	38400	614400	
18	28800	460800	
19	23040	368640	
20	14400	230400(AppleTalk)	

Note: when two baud rates are given (i.e. 2000/1986.21), the first number represents the ideal, and the second is the actual. The term 'baud' is taken to mean bits per second in the context of this document. ■

The clock bit of the ucr parameter is used to select between the /16 and /1 clock rates (1=/16, 0=/1). The /1 mode will only work between two MegaTalk boards, since they need to be clocked off the same oscillator. In /1 mode, port B acts as a "clock provider" and port A acts as a "clock receiver." The important point here is that if you run the MegaTalk boards at /1, the cable between machines must be connected to port A on one machine and port B on the other. In /16 mode, the boards are completely asynchronous and both ports are identical.

If the handshaking parameter is set (not -1), the XOFF flags are automatically cleared for that port.

Since the rsr, tsr, and scr parameters aren't directly relevant, they are not currently used. They are stored, however, and will be returned by the Rsconf call as expected.

The Rsconf call also supports the TOS 1.4+ method of reading the current baud rate by passing a -2 for the speed. The only difference is that to select one of the MegaTalk ports, you must set the speed to \$81FE or \$82FE (the low byte is a -2).

The MegaTalk ports are initialized to 9600 baud, 8 data bits, 1 stop bit, no parity.

IOREC

When using TOS 1.2 or above, the MegaTalk port A is mapped to BIOS device 6 and port B is device 7. With any version of TOS, you can use device \$81xx for port A and \$82xx

for port B (the 'xx' is irrelevant).

The buffer records use the same format as the RS-232 port, including the undocumented XOFF flag. The complete record for each port is:

NOTE:

All four buffers are initialized to 2K (this is subject to change). ■

<u>BYTES</u>	<u>NAME</u>	<u>DESCRIPTION</u>
0-3	ibuf	Address of input buffer
4-5	ibufsize	Size of input buffer in bytes
6-7	ibufhd	Input buffer head pointer (next write position)
8-9	ibuftl	Input buffer tail pointer (next read position)
10-11	ibuflow	Input buffer low water mark
12-13	ibufhi	Input buffer high water mark
14-17	obuf	Address of output buffer
18-19	obufsize	Size of output buffer in bytes
20-21	obufhd	Output buffer head pointer (next write position)
22-23	obuftl	Output buffer tail pointer (next output position)
24-25	obuflow	Output buffer low water mark
26-27	obufhi	Output buffer high water mark
28	rsr	Saved rsr value
29	tsr	Saved tsr value
30	ixoff	Input XOFF flag (-1 if XOFF in effect)
31	oxoff	Output XOFF flag (-1 if XOFF in effect)
32	handshake	Current handshaking mode (same as Rsconf value)

COOKIE JAR INFORMATION

The MegaTalk driver installs a cookie in the Cookie Jar (creating the Cookie Jar if necessary). The cookie is 'TALK' and its value is a pointer to a data table used by MegaTalk. The data structure is as follows:

BAUD RATE TABLE

The baud rate table that p__baudrate points to is a table of 32 words. Each word is the value to set the SCC's time constant to for each of the Rsconf speed values. Even though only the first 21 are used presently, all but the last are reserved. If you need to set up your own speed, put the correct SCC

time constant in the 32nd word and call Rsconf with speed set to 31 (OR'ed with \$8100 or \$8200 as appropriate). You can determine the proper SCC time constant from the baud rate (or vice versa) using one of the following formulae:

/16 Formulae:

$$\text{Baud} = \frac{230400}{2(\text{SCC} + 2)}$$

$$\text{SCC} = \frac{230400}{\text{Baud} \times 2} - 2$$

/1 Formulae:

$$\text{baud} = \frac{368400}{2(\text{SCC} + 2)}$$

$$\text{SCC} = \frac{3686400}{\text{Baud} \times 2} - 2$$

As stated earlier, /16 or /1 is determined by the clock bit of the ucr value passed to the Rsconf call.

INTERRUPTS

The MegaTalk board uses level 5 interrupts. The BIOS driver has an interrupt handler which determines what caused the interrupt and calls the correct interrupt handler.

It is highly recommended that you do not try to replace the interrupt handlers. The SCC chip is very complicated and has many caveats. If you have a specialized application that needs alternate routines, please contact us for further information.

BYTES	NAME	DESCRIPTION
0-1	version	Driver version number in TOS format (\$0100=1.0)
2-5	p__txbint	Pointer to port B transmit interrupt handler
6-9	p__extbint	Pointer to port B ext/status interrupt handler
10-13	p__rxbint	Pointer to port B receive interrupt handler
14-17	p__spech	Pointer to port B special interrupt handler
18-21	p__txaint	Pointer to port A transmit interrupt handler
22-25	p__extaint	Pointer to port A ext/status interrupt handler
26-29	p__rxaint	Pointer to port A receive interrupt handler
30-33	p__speca	Pointer to port A special interrupt handler
34-37	p__ahighin	Pointer to port A high speed input routine
38-41	p__bhighin	Pointer to port B high speed input routine
42-45	p__ahighout	Pointer to port A high speed output routine
46-49	p__bhighout	Pointer to port B high speed output routine
50-53	highbuf	High speed I/O buffer address
54-57	highlen	High speed I/O buffer length
58	ack	Optional transmitter ACK byte
59	—	Unused/reserved
60-63	p__baudrate	Pointer to baud rate table

Programming for Compatibility

By Leonard Tramiel

HIGH SPEED I/O ROUTINES

Since the ST's interrupt handlers can't keep up with the higher baud rates supported by the MegaTalk board, we have provided four very high speed I/O routines (port A input and output, and port B input and output). These routines can handle data at close to 90,000 bytes per second.

Using these routines involves a series of simple steps:

- 1) set `highbuf` (note 1) to the address of the buffer
- 2) set `highlen` (note 2) to the number of bytes to transfer (make sure your buffer is large enough!)
- 3) set `ack` (note 3) as appropriate
- 4) set the baud rate using `Rskonf`
- 5) call the appropriate I/O routine (note 4) in Supervisor mode (the address of `highbuf`, `highlen`, and `ack` can be determined via the TALK cookie)

Note 1:

There is only one set of `highbuf`, `highlen`, and `ack` locations that are used by all four routines. This isn't a problem since there can only be one transfer occurring at a time.

Note 2:

Both the sender and receiver need to know the length of the transfer. If the receiver doesn't know the length, this should be exchanged by the two machines before starting the transfer. If you are doing a block-

based transfer with known block sizes (i.e. 128 bytes, 1K, etc.), this isn't necessary—just set `highlen` accordingly.

Note 3:

If the `ack` byte is non-zero, it will be sent by the receiver to indicate it is ready to receive data. If `ack` is zero, no byte will be sent.

Note 4:

The four routines are `ahighin`, `bhighin`, `ahighout`, and `bhighout`; these are the port A input, port B input, port A output, and port B output routines, respectively. The locations of these routines are in the data structure pointed to by the TALK cookie. A simple JSR in Supervisor mode, or a `Supexec` call is all that's needed to start these routines once the other information is set up.

IMPORTANT:

The output routines begin IMMEDIATELY after being called. To prevent lost characters (the SCC can only hold three bytes), the receiver must be started FIRST. To ensure this, setting the `ack` byte to a non-zero value (ASCII 6—ACK is recommended), the receiver will transmit the `ack` byte as an indication it is ready to receive. Once the `ack` byte is received by the sending machine, start the output routine.

Keep in mind that while one of these routines is active, I/O on the other MegaTalk port is not possible, and any incoming data will be lost. These routines set the IPL to 7 preventing any other interrupts from occurring. ■

I could hardly believe it, someone actually asked a question about last month's article. That means that they read it, WOW.

The question was, "How do you do things without using line-A and GDOS fonts?"

The answer is obvious. Use the VDI.

I also forget another thing in the '030 list of pitfalls. The '030 has independent instruction and data caches, as a result it is possible for self-modifying code to get mangled.

By the way I was really glad to get a question about the previous article. I can do a much better job if you have questions and you ask them.

The most important thing that I can get to you is the importance of making sure that we have your software and updates in our library. The best way to ensure compatibility is to let us test it. We cannot go around things that are bugs in your code, at least not in all cases. What we can do is find bugs in TOS before you need to worry about them. ♦

MORE INFORMATION

If you would like information about MegaTalk, please feel free to contact us at:

Gadgets by Small, Inc.
40 W. Littleton Blvd., #210-211
Littleton, CO 80120
Voice: (303) 791-6098
Fax: (303) 791-0253 ♦

ATARI SOFTSOURCE™

Dan McNamee

Atari Softsource™ is now open on GENie for you to make your product entries. We have set a cut-off date of June 30th to get your entries on the first CD, so please make your entries as soon as possible. This does not mean that after this date you should not make any entries since Atari Softsource™ will be open to the public on GENie for searching as well. We will also release updates on the CD on a regular basis, so if you don't make it in time for the first one, you can still make it on later ones. But still, please make all effort to get on the first one. If you do not have a GENie account, you can get one by doing the following:

HOW TO SIGN UP WITH GENie (USA only):

STEP ONE

Set your modem for Half duplex (local echo) at 300 or 1200 baud.

STEP TWO

Dial toll free 1-800-638-8369. Upon connection, type HHH and hit the Return key.

STEP THREE

At the U#= prompt, type XTX99588,GENIE and press RETURN. Have a major credit card or your checking account number ready. For more information in the United States or Canada call 1-800-638-9636.

There is NO signup fee or monthly minimum charge to have a GENie account.

Once you have an account, you need to go to the ATARIDEV Roundtable. To get there, just type ATARIDEV at any GENie prompt and hit return. The first time you visit the roundtable, you will not be able to enter since access is restricted only to people we have verified as being registered developers.

Next, send e-mail to me at my D.MCNAMEE account, and once I have verified that you are registered, I will let you in.

Please be patient on access, I will enable access as quickly as possible, but it could take a day or two. Once you are in the roundtable, you can make your Atari Softsource™ entries by selecting the Softsource entries option on the menu.

There still seems to be a bit of confusion about Atari Softsource™.

First of all, if you don't have a product, then you do not have to make an entry. Atari Softsource™ is only for products that you would purchase through a dealer or some other source. This does not include public domain or shareware programs.

The Atari Softsource™ system that you will see at the dealers will consist of, at minimum, a 1040ST, SM124 and a CDAR504. Atari Softsource™ also runs on a Mega ST with

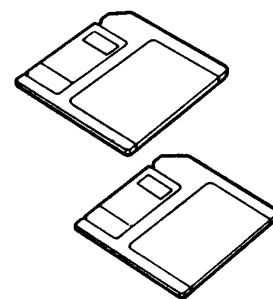
a Moniterm monitor.

This does not mean that any demos that you make must run on this specific setup. The demos on the CD can be copied onto disk and run on any system setup. Demos can be anything you want them to be. We do suggest for software products that you use the Demonstrator program, but that is not required to get your demo on the CD.

Hardware is a different problem, though, when it comes to demonstration. If you have a hardware product, we would still like to have a demo of some kind. Be creative. You could do something like a slide show that shows off your product.

That's all for this month's sermon. Please make your Atari Softsource™ entries right away! See you in 30.

Dan. ♦



QUESTIONS & ANSWERS

J. Patton

QUESTION: How can I access the spindown counter of Stacy's hard disk?

ANSWER: The spindown counter is available only from versions 3.02 and later of AHDI. It is the long word positioned after the last documented patchable variable (\$18 + n see AHDI release notes). The units of time are 200 Hz timer ticks with the default value set to never timeout.

QUESTION: Is there any way to detect that you are on a Stacy?

ANSWER: For all intents and purposes you should consider the Stacy as a desktop model. Do not rely on the OS version number for machine enhancements. Use the cookie jar!! For DMA type sound hardware like the STE, use the sound cookie, for video hardware use the video cookie.

QUESTION: I'm trying to use Setscreen and Physbase on the Moniterm and it doesn't seem to be working.

ANSWER: The Moniterm monitor's hardware does not support page flipping. Therefore, the Setscreen call will not be useful for double buffering. Physbase and Logbase work as advertised.

QUESTION: I'm trying to use the IKBD mouse routines in absolute mode without success. The mouse doesn't respond after I set the mode. I'm using VDI routines and I want to change the mouse scale.

ANSWER: VDI will not recognize mouse packets unless they are relative. An easier solution would be to use the VEX_MOTV call to control the mouse movement.

NOTES:

The Pexec cookbook needs to be corrected in two places. The first is the implication that a command line can be 126 or 127 characters long. In fact, GEMDOS only copies up to 125 bytes of the child process's basepage or up to the null character. The length byte is ignored.

Second, the code fragment which computes calls Mshrink should read:

```
:  
clr.w    -(sp)  
move.w  #$4a,-(sp)  
trap    #1  
add.w   #12,sp
```

Atari's linker for Alcyon-style object files, ALN, performs an incorrect link operation without an error message in the following circumstances:

1. You use the -p or -q options, and
2. You have more than 8192 symbols in your project, and
3. One of the symbols after the 8192 threshold is actually referenced in the fixup information of the output file.

This will not affect most people

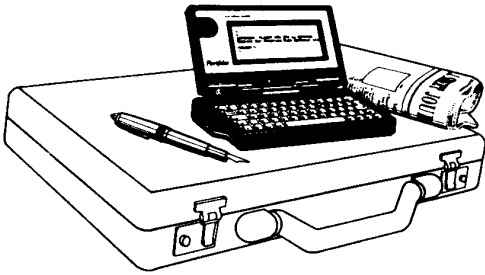
because they will not have 8192 symbols in their projects or because they don't use -p or -q.

The 8192 limitation is inherent in the Alcyon object file format, where symbol numbers are encoded into 13 bits ($2^{13} = 8192$) when referenced in the fixup information. The only possible fix to the linker is to produce an error message when this situation arises.

If you should run into this problem, there are a number of things you can do. First, use -s, not -l; the 8192-symbol limit is on the output of the link, after the locals are stripped. Second, you can split your link into multiple, smaller links using -p and -s (not -l), to get rid of local symbols. Finally, study the operation of -k, which adds a multi-file-module capability to projects using Alcyon-style object files: symbols can be visible (global) to a subset of files, but then made invisible (local) before that subset is linked with the rest of the project.

WELCOME!

Mike Pooler



Welcome to the Portfolio section of the newsletter. I develop Portfolio applications at Atari, and I share your excitement about our little PC. I'm looking forward to watching it catch on.

The Portfolio is sturdy, inexpensive, and small - it can be used anywhere. Because it fits into environments where laptops don't, there are many new uses for it, requiring new software. For example, one developer uses the Portfolio in an airplane cockpit for navigation calculations.

Consider some other places to bring the Portfolio: a restaurant; a baseball game; a high school; a golf course; a party. Each place suggests an application: convert calories; keep batting averages; schedule classes and homework; count golf strokes and calculate handicaps. The Portfolio is more useful than a laptop for applications like these. (Oh yeah, I'll let you think of the party applications).

This issue contains a list of The Most Requested Software which are requests from our current users. If you are interested in discussing software ideas or plans, give me a call. We might even want to publish your applications.

New software attracts new users, who in turn create demand for more software. This is a cycle that often starts slowly, but then speeds up with a vengeance. And of course, by being DOS compatible,

the Portfolio has a good head-start. But it's up to us to make these ideas reality - to make the Portfolio a lasting success.

To help you implement your ideas, this issue contains:

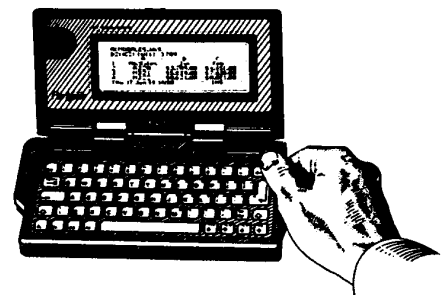
- Technical Questions & Answers by J. Patton.
- Portfolio Online by Dan McNamee

Starting next month, we will address specific technical issues in depth.

Please let us know what type of information you need (by writing or calling). Also, get in touch if you'd like to submit an article about the Portfolio, or just share a tip or two.

Please submit all requests to:

ATARI CORPORATION
Post Office Box 3427
Sunnyvale, California 94088-3427
Attn: Mike Pooler ♦



ATARI® Portfolio™

QUESTIONS & ANSWERS

J. Patton

QUESTION: How do you implement the page structure of a RAM card and what is the theoretical limit?

ANSWER: At page register location 000Ah are 8 bits which identify 128k pages. Theoretical card capacity is 2 megabytes.

QUESTION: What are the operating and storage temperature ranges of the Portfolio?

ANSWER:

Operating temp. range:
0°C-35°C.
Storage temp. range:
-20°C- 50°C.

QUESTION: I'm designing a peripheral which I want to power the Portfolio, so I need to know the typical and maximum current drawn by the Portfolio.

ANSWER:

Sleep (off) 135-238uA
Wait (Key wait) 40-75mA
Operating (Key in) 90.4-146.9mA

Parallel only 2-3mA
Serial only 10-15mA

QUESTION: How do I address the I/O ports (serial and parallel)?

ANSWER: The manner of accessing the Portfolio ports is to inquire from the BIOS starting at address 400H. The 8 bytes will contain the base address of COM1

through COM4 ports. Starting at base address 408H will be the port addresses for printer port 1 through printer port 4.

A caveat from early versions of the system: if the word at 408H is 0 then assume the port is at 8078H, but always check through the BIOS. The parallel port is standard in most ways, but not fully bi-directional.

The keyboard Port cannot be given out due to its proprietary nature and possible future redesign.

QUESTION: Is there any way to disable the <Atari> and <lock> keys?

ANSWER: The lock key cannot be disabled through means other than the BIOS call to enable/disable the status line (Int 61 Fn 2EH). The lock key is sensed by hardware and returns no scan or ASCII code and actually halts the processor.

The Atari key can be detected through a BIOS call so a key combination (such as <Atari-x>) can be detected by your program. The BIOS call is:

Int 61 Fn 2FH

Parameters:
AH 2FH

Returns:
AL=20H If the Atari key was pressed.

There is no documented way to prevent the internal applications from being accessed.

QUESTION: The Get BIOS version number call (Int 61 Fn 2CH) does not work as documented.

ANSWER: The documentation is incorrect, Interrupt 60 Fn 00H will return a null terminated string in DS:DX.

This month's newsletter contains an addendum to the Portfolio technical reference manual. The documents are:

- Interrupt 60 specification
- Larger than 64k run files
- Serial Port Programming Example

Also included for Portfolio developers is a disk which has the Interrupt 60 emulator (I60), and the sample terminal emulation example which uses the serial port (TM), and UPDATE.COM (UPDATE). ♦

PORTFOLIO ONLINE!

Dan McNamee

Hello! My name is Dan McNamee, and I run Atari Softsource™. I have been asked to describe Atari's online activities for the benefit of our new Portfolio developers.

Currently, Atari is officially conducting all of our support on the GENie computer network. We have our own category in the ST RoundTable for customer support of the ST line of computers, and we have the ATARIDEV RoundTable where we do developer support for registered developers of the ST line of computers.

Even as I am typing this all of the little gnomes and pixies at GENie (Hi Jeff and Darlah!) are busy at work creating a product support RoundTable for the Portfolio that is similar to what already exists for the ST.

We are also working on setting up new categories in ATARIDEV for Portfolio developer support.

I would like to encourage all of you to get GENie accounts, if you do not have them already, so that you may also participate in this developer assistance tool.

We have found this to be one of the best ways to get out important information and provide answers to questions in a timely manner.

If you do not yet have a GENie account see details on page 8.

THE MOST REQUESTED SOFTWARE

Cliff Brooks

Since the Portfolio began shipping back in August of 1989, customers have been clamoring for additional software to run on their machines. Though many users have specific requirements, a number of requests have been voiced so frequently that we have been able to assemble a "10 Most Wanted List".

A Programming Language: This is the runaway winner in the "gotta have" category. We receive numerous requests per day for a programming language.

Communications Software: Many people want to use their Portfolio to call the office computer when out of town. While the public domain program XTERM2.COM meets many needs, there is great demand for a full-featured package that includes terminal emulation.

Database: Though many have found the Address Book function a sufficient stand-in for an actual database, many others need the ability to tailor the Database.

Expense Report: Though keeping track of expenses can be done using the spreadsheet, many users are unfamiliar with spreadsheet use and are seeking an easier alternative.

Games: All work and no play... After writing that memo or entering data into a spreadsheet, many owners would like to relax with a challenging game of skill and

logic.

Appointment Calendar: While many users find the Diary suitable for their needs, others would rather have an appointment diary that allows them to note the day's activities without assigning a time to them (a "to do" list). They also desire the ability to attach notes to specific appointments.

Conversion Programs: Many users love the Address Book but need an easy way to transfer files to and from their desktop applications. Though this type of file manipulation is possible, the average user doesn't have the knowledge to do this. Creating a PC program that will convert the Portfolio's Address file to the major file formats on the PC and vice-versa, would be valuable. In addition, a program that will convert the text editor's ASCII file format into Word Perfect, Wordstar and other popular formats would be valuable.

Spell Checker/Thesaurus: For the Text Editor.

Multi-Language Translator

Clock/Timer—(24 hour format): Some users have a need to time sessions with clients. Almost all users are unhappy with the Portfolio's Military time format and the inability to display current/ongoing time on screen while using an application. ♦