



ATARI.RSC

THE RESOURCE FILE

The Atari Developers Resource

We're Counting On You!

Charles Cherry

YOU ARE LOSING MONEY 1

It's taken longer than any of us had expected, but Atari is finally on the move in the U.S. The STEs are here and Atari U.S. is signing up distributors.

But an interesting thing happens when distributors sign up for Atari computers. They want to know about software and peripherals, too. Guess who they ask. They ask us.

So, Garry Tramiel asked me to compile a list of suitable products for the new distributors. Of course, I went to Atari Softsource. Over half of you have not made entries in Atari Softsource yet. If you haven't and I didn't remember you, those distributors will not be calling you.

YOU ARE LOSING MONEY 2

Atari's have been sold in Japan primarily as MIDI controllers. Now the demand is increasing there for other applications.

So, Tony Tokai of Atari Japan asked me to compile a list of suitable products for him to import into Japan.

Of course, I went to Atari Softsource. Over half of you have not made entries in Atari Softsource yet. If you haven't and I didn't remember you, Tony Tokai will not be calling you.

JUST DO IT

Post your entries in Atari Softsource now! As Nike (a remarkably successful company in a cutthroat market) says, Just Do It. Stop putting it off. Stop wondering whether it's worth the effort. Stop questioning whether Atari is going to make it work.

Just Do It. Now.

It's already been worth the effort for companies who made their entries.

It already works.


WE'RE ALL IN THIS TOGETHER

The more comprehensive Atari Softsource is, the more effective it is.

Every developer is counting on you to do your part. The Independent Association of Atari Developers (IAAD) is encouraging everyone, members or not, to comply, and most of its members already have.

GENie is counting on you to do your part. They are bending over backwards to help you get your products posted. They are paying your on-line charges while you make your entries. You will not be charged for the time you are in Atari Softsource.

Atari is counting on you to do your part. We've instituted this program, assigned full-time staff, publicized it, and we'll distribute it and internationalize it. All at our cost. No other computer company has laid an opportunity

	Inside This Issue: July 1990
BITS & BYTES.....	3
CALENDAR.....	5
EQUIPMENT EXCHANGE.....	4
GENIE DEVELOPER CONFERENCE.....	2
A LYNX IN YOUR FUTURE.....	4
PORTFOLIO.....	6
PORTFOLIO Q & A.....	9

THE RESOURCE FILE

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CONFIDENTIALITY

The information in this newsletter is confidential. It is for your use in developing products compatible with Atari computers only. You are responsible for protecting the confidentiality of this material in keeping with your Confidentiality Agreement. If you need to reveal some of the information in this newsletter, contact Charles Cherry first to get permission.

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Genie Developers Conference

July 12, 1990

7:00pm PDT

**With Charles Cherry
and Dan McNamee**

We're Counting on You.....

like this at the feet of its developers.

You must move this to the top of your priority list. Prepare entries for your products. Put together demonstrations. Do a good job, show your products in their best light, but do it quickly. Then upload them to GENIE.

IT'S TIME TO GET TOUGH

Some developers asked for more time. They say they couldn't get their demos finished by June 30. They want the first CD ROM delayed until they can make their entries.

On the other hand, the developers who have made their entries want the CD-ROM released so they can reap the benefits. They point out that someone who has not posted their products in three months probably won't do it in four or five, either.

We're going to extend the deadline to the end of July, but we're going to put some teeth in it.

ONE

Developers who have not posted will miss opportunities like the ones described above.

TWO

Effective July 15, 1990, developers who have commercial products and have not posted will be restricted from buying at developer prices.

THREE

Effective July 31, 1990, developers who have not posted will miss the first CD-ROM. There will be no further postponements.

FOUR

Developers who have not posted will not get the new dealer and distributor lists.

FIVE

Developers who have not posted will not participate in dealer mailings.

GET THIS TO THE RIGHT PERSON

If you are reading this, but are not in a position to make Atari Softsource decisions for your company, copy these pages and send them to the President, the Marketing Manager and the Sales Manager of your company. Make sure the right people know about Atari Softsource. Make sure you participate. ♦

BITS AND BYTES

BUYING DEVELOPERS' KITS

As ATARI.RSC gets stronger, many new people want to join. Some are buying used developers' kits from other people, thinking this makes them a Partner in ATARI.RSC. There are several problems with this.

- The Developers' Kit is protected under the Non-disclosure Agreement and cannot be sold.
- Many of the Developers' Kits have not been updated and are not accurate.
- ATARI.RSC consists of a lot more than a box of documentation.

You must not sell your Developers' Kit. If someone is interested in becoming an ATARI.RSC Partner, have them give Charles Cherry or Gail Johnson a call. We'll make sure they get properly established.

DEALER MAILING

Atari used to include flyers from developers with our mailings to dealers. Some developers have asked if we could do that again. Your wish is our command. We'll do a developers' mailing in August. Put together a real slick promotional package pitching your products to the dealers. Send 1000 copies to Gail Johnson by the end of July. We'll mail them to the dealers. Only developers who have posted their Atari Softsource entries will be included.

METADOS 1.7

MetaDOS 1.7 is ready and we are automatically sending it to developers who have CDAR504s. Other developers who have MetaDOS should write to Gail Johnson requesting the update. The update is free. If you are not working with CD-ROMs or networking, please do not order MetaDOS now. As soon as it is finalized, it will be automatically sent to you with The Resource File.

MORE SHOWS!

Included with this newsletter are information sheets for upcoming World of Atari and WAACE shows. WAACE AtariFest '90 is a "pipe and drape" show handled by a professional exhibit management firm under the sponsorship of the Washington Area Atari Computer Enthusiasts. This is the 6th edition of the show. According to WAACE, in 1988 and 1989 the show drew 3500 and 2500 visitors respectively. In 1989 there were forty vendors at the show.

Individual booths at the show are 8 ft x 8 ft. Each booth has a sign, a 6 ft table, and an electrical outlet. Each vendor receives a half page ad in the show program. Prices for larger size ads are available upon request. The cost for a single booth is \$500. Two booths are \$850. Additional booths are \$250 each. Orders with a 50% deposit received before 15 July get a 20% discount.

Developers who do not wish to sell directly to the public can participate in the show as seminar speakers, demonstrators, or as visitors. Please note the early deadlines for hotel reservations shown in the flyer.

Codehead Software is furnishing a speaker for the Saturday evening banquet.

Up to date news on this event is available in Category 11, Topic 6 of the GENie ST Roundtable bulletin board. Further details on show arrangements can be downloaded from the GENie ST file library.

A COMPLIMENTARY CARDFILE

CardFile is a superb desk accessory which combines a rolodex and an appointment calendar. I use mine every day and could not get along without it. It has grown up out of shareware and is now a commercial product. See advertisements in STart and ST Informer for more information. The author and publisher, Tyson Gill, is offering a complimentary copy to registered Atari developers. This offer is good until August 31, 1990. Send \$5.00 (to cover the cost of disk and shipping) with your name and address to:

Tyson Gill
GT Software
2114 Kirton Avenue
Cleveland, OH 44135-3612 ♦

EQUIPMENT EXCHANGE

Gail Johnson

In the event that you have a broken or defective piece of equipment, the following steps are recommended as the most expedient ways to rectify the situation:

ONE: CALL ME

I need to know that you are sending it back, so its path is easier to track. In addition, if it is out of warranty, you need to check with me for the exchange price. It might also interest you to know the in-stock status of the item before you send in yours.

TWO: PACK IT SECURELY

(preferably in the original packing materials). If you are returning a

PCB assembly (board), it must be sent with its shield. DO NOT send back a laser printer with the drum and toner assembly still installed. They must be packaged separately in the carton.

THREE: ENCLOSE A LETTER

Enclose in the box a letter to my attention that includes your name, address, phone, a description of what you believe to be the problem, and a check or money order if it is out of warranty.

FOUR: LABEL INSTRUCTIONS

The mailing label should read, clearly, as follows: Atari Corp., 390 Caribbean Drive, Sunnyvale, CA

94089, ATTN: DEV./C.R.

FIVE: RECEIVING REPORT

I know that it arrived at the warehouse when I get a copy of a "Receiving Report." From here I can process your order for a shiny, new product.

SIX: REPLACEMENT

Please, do not send any items for exchange or replacement to me here at the corporate address (1196 Borregas Avenue). It causes unnecessary paperwork and lost time.

Thanks for your cooperation! ♦

THE LYNX IN YOUR FUTURE

The Lynx is a blast. If you've tried it, you know it's addictive. If you haven't, here's your chance. ST and Portfolio developers now can buy a Lynx game machine and game cards at developer's prices (limit one each).

The Lynx is Atari's phenomenally successful hand-held, color LCD game machine. The demand for the machine is great, and the demand for games is even greater. In short, we need your talents to help fill the demand.

If you're interested in developing for the Lynx, write to:

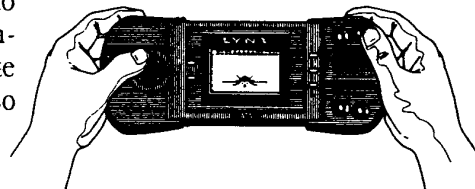
ATARI CORPORATION

Lynx Development
330 N. Eisenhower Lane
Lombard, IL 60148

Send your company information and a brief description of the product(s) you would like to develop. Lynx documentation is available to those who complete a Non-disclosure Agreement. Complete development systems are also available now.

The Lynx development system includes a fully functional develop-

ment environment (called the 'Howard Board') complete with display. For multi-player testing, a ROM emulator (called 'Pinky') will be available this Summer. The development system requires an Amiga with 2 to 3 megabytes of RAM and at least a 40 megabyte hard drive. ♦



Calendar Of Events

Kimberly Metcalf

AUGUST

August 4-5, California

World Of Atari Show in San Jose. Show hours will be Saturday 10:00am-6:00pm and Sunday 10:00am-5:00pm. For more information about exhibiting or tickets contact:

Richard Tsukiji
(503) 393-9688.

August 15-17, Massachusetts

WINDOWS Conference & Exposition will be held at the World Trade Center in Boston. The Conference will draw corporate computer executives from Fortune 1000 Windows-specific computer sites across the country, seeking the latest applications and solutions in the Windows environment. For more information contact:

Kevin McGrath
(415) 601-5000.

August 24-26, West Germany

Annual Atari Messe (Fair) in Dusseldorf. Over 200 exhibitors and 45,000 visitors expected. For more information write: Atari Germany GmbH Postfach 1213,D-6096 Raunheim, West Germany.

Or contact:

Thomas Huber
Voice: 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
(818) 246-7286.

OCTOBER

October 3-5, California

The Fifth annual Seybold Computer Publishing Conference and Exposition will held at the San Jose Convention Center in the heart of Silicon Valley. This show will once again provide the world stage for the display, discussion and debate of innovative information delivery technology. For more information please call:

(213) 457-5850.

October 6-7, Virginia

WAACE AtariFest'90. The Fest will be held at the Sheraton Reston

featuring shopping bargains from dozens of vendors. Demonstration rooms (both days!). Seminars, door prizes and a banquet on Saturday evening at 8 PM. For more information contact:

Russell Brown
(703) 680-2698.

October 10-12, New York

INFO '90 Show will be held at the Javits Convention Center in New York. INFO'90 is the only exhibition and conference to address the rapidly evolving integrated computer market. For more information contact:

Marilyn Harrington
(203) 352-8477.

October 25-27, Massachusetts

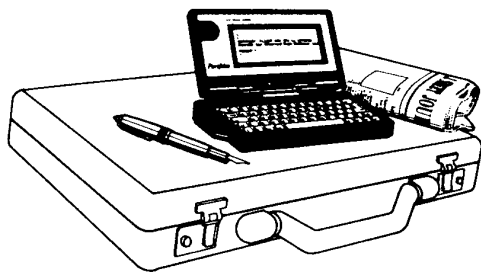
Northeast Computer Show to be held at the Bayside Expo Center in Boston. The focus of this year's Show is to address the specific needs of the buyer, finding customized solutions for their every computing requirement. For more information contact:

The Interface Group
(617) 449-6600.

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 ♦



ATARI® Portfolio™

PORTFOLIO GRAPHICS

Mike Pooler

The Portfolio can enter a graphics mode where it displays 240 pixels across by 64 pixels down. Each pixel is either on (black) or off (white). That's plenty of room for graphs, charts, diagrams, digitized pictures, and even video games.

To help you develop graphics applications for your Portfolio, we are providing a listing of a program called GRAPHICS.C. You can type this in and compile it with Microsoft C or Turbo C. Or, you can download it from CompuServe (go aportfolio), or GEnie (Atari.RSC). We will also include it on the next diskette we send you.

The GRAPHICS program runs on a PC (with or without I61 loaded) and on a Portfolio. This allows you to develop graphics applications on your PC that will run on the Portfolio.

It includes routines to:

- Test if you are running on a Portfolio or IBM PC
- Put the Portfolio or PC into graphics mode
- Turn a pixel on or off
- Read the color of a pixel (on a PC)
- Return the Portfolio or PC to text mode

The strategy of GRAPHICS is simple. It:

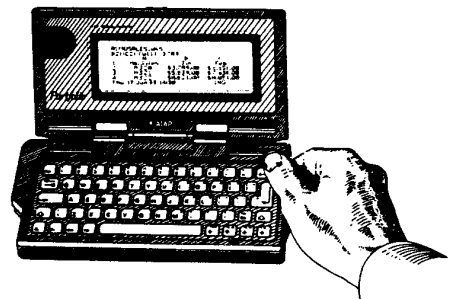
- 1) Invokes "CGA 320x200x4 mode", using INT 0x10, function 0.

(This, puts the Portfolio into 240x64x2 mode).

- 2) Plots points with INT 0x10, function 0xC.
- 3) Reads points with INT 0x10, function 0xD.
- 4) Returns to text mode with INT 0x10, function 0.

All of the above routines except #3 work on both the Portfolio and on a PC with a CGA compatible graphics card. Because of a bug in the Portfolios BIOS, INT 0x10 function 0xD is not reliable. GRAPHICS avoids calling INT 61 functions on a PC- so the same executable works on the PC and Portfolio.

You will find more information about using the GRAPHICS routines in the source-code comments. ■



```

#include <stdio.h>
#include <stdlib.h>
#include <dos.h>

/* If using Microsoft C (instead of Turbo C),*/
/* remove comments on the following line... */
/* # define MSC*/

/* Plot a pixel */
Plot_Pixel(X, Y, Color)
{
    union REGS ir, or;
    ir.h.ah = 0xC;
    ir.h.al = Color;
    ir.x.dx = Y; /* row */
    ir.x.cx = X; /* column */
    ir.h.bh = 0; /* page */
    int86(0x10, &ir, &or);
}

/* Read the color a pixel
Note: this does not work on the Portfolio! A future
UPDATE.COM may fix it.*/
unsigned char Read_Pixel(X,Y)
{
    union REGS ir, or;
    ir.h.ah = 0xD;
    ir.x.dx = Y; /* row */
    ir.x.cx = X; /* column */
    ir.h.bh = 0; /* page */
    int86(0x10, &ir, &or);
    return(or.h.al);
}

/* This tests for a Portfolio by seeing if interrupt 0x61
points to anything. It is fooled if the I61 simulator is
running, or if some other resident program is using
interrupt 0x61. */
int Is_Portfolio()
{
    unsigned char far *vector;
#ifdef MSC
    vector = (unsigned char far *)__dos__getvect(0x61);
#else
    vector = (unsigned char far *)getvect (0x61);
#endif
    return (FP_SEG(vector) != 0);
}

}

/* Portfolio interrupt */
#define PF 0x61

/*Functions of Portfolio Interrupt 61 (for ah) */
#define PF_Init_61 0

/* Initialize the Int 61 routines */
Init_Portfolio()
{
    union REGS ir, or;
    ir.h.ah = PF_Init_61;
    int86 (PF, &ir, &or);
}

/* This puts the Portfolio into graphics mode: 240 x 64,
black and white. This also puts a PC into 320 x 200,
four color graphics mode. Pixels in 320 x 200 mode on
a PC have a similar aspect ratio to the pixels on the Port-
folio, so graphics will look the same on both machines.*/
Graphics_Mode()
{
    union REGS ir, or;
    ir.h.ah = 0;
    ir.h.al = 4;
    int86 (0x10, &ir, &or);
}

/* This puts the Portfolio into text mode. If on a PC com-
patible, it will put it into 80 column text mode. */
Text_Mode()
{
    union REGS ir, or;
    ir.h.ah = 0;
    ir.h.al = 3;
    int86 (0x10, &ir, &or);
}

/* These globals are used by Set_Black_And_White()*/
int Black;
int White;

/* This routine sets the global Black to produce black
and White to produce white, on either a PC or Portfolio.
If on a PC, it also paints the CGA screen white (The Port-
folio starts out all white). You can delete this

```

function, Black, and White, if you don't need to see the same colors on the Portfolio and the PC:*/

```
Set_Black_And_White()
{
  int x, y;
  if (Is_Portfolio())
  {
    Black = 1;
    White = 0;
  }
  else
  {
    Black = 0;
    White = 3;
    for (x = 0; x < 240; x++)
      for (y = 0; y < 64; y++)
        Plot_Pixel (x, y, White);
  }
}

/* This is a sample routine that uses Plot_Pixel to draw
boxes */
Test_Plotting()
{
  int x, y;
  int x1 = 0;
  int x2 = 239;
  int y1 = 0;
  int y2 = 63;
  while (!(kbhit()) && (y1 < 32))
  {
    for (x = x1; x <= x2; x++) Plot_Pixel (x, y1,
Black);
    for (y = y1; y <= y2; y++) Plot_Pixel (x2, y,
Black);
    for (x = x2; x >= x1; x--) Plot_Pixel (x, y2, Black);
    for (y = y2; y >= y1; y--) Plot_Pixel (x1, y, Black);
    x2 -= 2; y2 -= 2; y1 += 2; x1 += 2;
  }
  while (!(kbhit()) && (y1 > 0))
  {
    x2 += 2; y2 += 2; y1 -= 2; x1 -= 2;
    for (x = x1; x <= x2; x++) Plot_Pixel (x, y1,
White);
    for (y = y1; y <= y2; y++) Plot_Pixel (x2, y,
White);
    for (x = x2; x >= x1; x--) Plot_Pixel (x, y2, White);
```

```
    for (y = y2; y >= y1; y--) Plot_Pixel (x1, y, White);
  }
  while (kbhit()) getch(); /* Get rid of any waiting
keystrokes */
}
```

```
main()
{
  /* If running on a Portfolio initialize the Int 61 routines
*/
  if (Is_Portfolio()) Init_Portfolio();
  /* Put the screen into graphics mode */
  Graphics_Mode();
  /* At this point, you can use Plot_Pixel and
Read_Pixel for both the Portfolio or a PC. You can
optionally use the next routine to give you identical
color schemes on the two machines. It does this by set-
ting up the two global variables Black and White, which
you then use in calls to Plot_Pixel*/
  Set_Black_And_White();
  /*Supply your own routines here */
  /* This sample routine draws boxes & waits for a key */
  Test_Plotting();
```

```
  /* Put the screen back into text mode */
  Text_Mode();
} ♦
```

Questions & Answers

J. Patton

Q: I tried debug from my DOS 3.3 package which had a version conflict message. Are there any debuggers that can be used on the Portfolio?

A: SYMDEB which was with the MASM (Microsoft Assembler) package (pre codeview) works well with the Portfolio (It even recognizes 40 column mode). Debug from MS DOS version 2.1 will work but has a problem with .EXE files.

Q: I'm building a peripheral, what is the recommended loading per signal?

A: Recommended loading is 2 and maximum recommended loading is 6 CMOS loadings.

Q: Is there any way to turn off the keyboard repeat on the Portfolio?

A: No, the control of the keyboard repeat rate is handled by the custom ASIC.

Q: How do you do direct video access to the Portfolio screen?

A: You can write directly to the Portfolio's MDA-like video RAM at B0000H. There is only one page of text.

This RAM is not the actual screen buffer, but an image that is maintained in MDA-compatible form. It is used to refresh the actual display. The Setup/Display/Refresh menu option controls when this

refresh is to occur. You can cause it to happen programmatically by performing an Int 61H with AH 12H.

We recommend using the BIOS calls for dealing with screen output as it is portable and not much slower.

Q: I would like to be able to set the display mode to be external or internal. How do I do it?

A: Interrupt 61H Fn 0eH gets/sets the screen mode in whatever the present state of the machine is in (external or internal) and will remain so only while within the program. Fn 23H stores a copy of the mode allowing it to be changed more permanently. Fn 0eH should be issued after 23H.

Parameters:

AH 23H
AL=0 Get mode
AL=1 Set mode
DH Internal mode
DL External mode

Returns:

if AL=0
DX Mode
if AL=1
DX Old mode

INTERRUPT 60H

Some overall windowing strategies would probably be helpful. Typically:

A) calculate the space required to save the area you are about to cover with a pop-up window,

B) save the existing area's image,

C) paint the new window, gather input or whatever,

D) restore the previous image.

Q: Do you need to initialize anything first, such as via interrupt 61H, service 0 ?

A: No.

Q: Fn 10H (Box area calculation) is documented as both AH and AL returning the same value. Is this correct?

A: This is correctly documented and we suggest that you use AL.

Q: Fn 10H also returns the number of bytes excluding attributes in BX. How can I calculate the number including attributes?

A: Multiply BX by two.

Q: What is the depth parameter of Fn 0fH (Menus) useful for?

A: The depth parameter is used to prevent the displayed menu extending below the bottom of the screen which can cause problems. Maximum value is 8 corresponding to the number of lines on the screen. ♦