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Mac OS 8: About MRJ Read Me

TOPIC

This article is the About Mac OS Runtime for Java 1.0.2 Read Me file that comes with Mac OS 8.0.

DISCUSSION

Introduction

Mac OS Runtime for Java (MRJ) is Apple's implementation of the Java runtime environment based on software from Sun Microsystems, Inc. With MRJ, Mac OS applications can run Java applets and applications.

MRJ 1.0.2 implements version 1.0.2 of Sun's Java. MRJ 1.0.2 includes Apple Applet Runner, a standalone application that runs Java applets, and Apple Applet Viewer, an OpenDoc viewer you use to put Java applets into OpenDoc documents.

MRJ 1.0.2 is a minor upgrade to MRJ 1.0.1 that fixes a bug where some Java applications were not able to save files.

Important: The Applets menu in Apple Applet Runner includes a set of applets provided by Sun Microsystems, Inc. These applets were not created by Apple Computer, Inc. and may not follow Apple guidelines for user interaction. For example, buttons in an applet may have different behavior from buttons in applications developed specifically for the Mac OS.

System requirements

MRJ 1.0.2 works on computers with 68030 or 68040 microprocessors or PowerPC microprocessors. You also need System 7.5 or later, a minimum of 8 MB of RAM (16 MB is strongly

recommended) and at least 7 MB of free disk space. Computers with 68030 or 68040 microprocessors must have 32-bit addressing turned on. This can be done by using the Memory control panel.

The Apple Applet Viewer requires OpenDoc 1.0.4 or later. To get OpenDoc, see the OpenDoc Web page at <http://www.opendoc.apple.com/>. MRJ 1.0.2 and the Apple Applet Runner do not require OpenDoc.

Using Java applets over the Internet requires MacTCP 2.0.4 or later, or OpenTransport 1.1 or later with TCP/IP, and an active Internet connection.

MRJ 1.0.2 works with Cyberdog 1.2.1 or later. See the Cyberdog Web page at <http://www.cyberdog.apple.com/> for more information.

What Is Installed with MRJ?

The MRJ 1.0.2 installer places the required software components in your System Folder. If necessary, the installer will force you to restart your computer before using MRJ.

Warning: If you have been using a pre-release version of MRJ, you need to remove files installed with the pre-release version before installing version 1.0.2. Use the list below to check the files you need to remove. However, do not remove the file named Text Encoding Converter or the folder named Text Encodings.

On all computers, MRJ 1.0.2 installs:

- Mac OS Runtime for Java folder in the Apple Extras folder at the root of the startup disk
- MRJ Libraries folder in the Extensions folder of the active System Folder
- Text Encoding Converter in the Extensions folder of the active System Folder
- Text Encodings folder in the active System Folder

If you have a 68030 or 68040 computer, MRJ 1.0.2 also installs CFM-68K Runtime Enabler in the Extensions folder of the active System Folder

If you have OpenDoc installed, MRJ 1.0.2 also installs:

- Apple Applet Viewer Libraries in the Editors folder of the active System Folder
- Apple Applet Viewer Stationery in the Stationery folder at the root of the startup disk

Using the Apple Applet Runner produces a preferences file named Apple Applet Runner Prefs in the Preferences folder of the active System Folder.

Description of MRJ Components

MRJ 1.0.2 contains the system components necessary to use Java. It also includes two demonstration tools that use these components to run Java applets.

System Components

The MRJ 1.0.2 installer puts a folder named MRJ Libraries in the Extensions folder of the active System Folder. This folder contains two items necessary for Java support: MRJLib and the MRJClasses folder.

Apple Applet Runner

You use Apple Applet Runner to run Java applets from your local disk. If you have MacTCP or Open Transport installed and an active Internet connection, you can also run Java applets over the Internet.

You can open URLs or local HTML files containing <applet> tags from the Applet Runner's File menu. In addition, you can drop HTML files containing <applet> tags onto the Apple Applet Runner application icon from the Finder. You will only see the applet itself inside Apple Applet Runner; if you use a Web browser to open the HTML file, you may see additional information.

Apple Applet Runner remembers URLs of remote (http://) or local (file:///) applets. This information is stored in the Apple Applet Runner Prefs file in the Preferences folder of the active System Folder. A few sample URLs are available by choosing Open URL from the File menu; you may add more URLs if you desire. You must have an active Internet connection to use these remote URLs.

Demonstration applets are available under the Applets menu in Applet Runner. You may run these demonstration applets even if you do not have an active Internet connection. These applets are stored locally in the Applets folder.

Apple Applet Viewer (for OpenDoc)

You use Apple Applet Viewer to place Java applets into your OpenDoc documents.

A folder called Apple Applet Viewer is installed in your Editors folder and the Apple Applet Viewer Stationery file is installed in your Stationery folder. Refer to your OpenDoc

documentation for
instructions on using stationery.

You use Java applets by dragging one of the following to the Apple Applet Viewer frame:

- An HTML file that contains an <applet> tag,
- A text file that contains a URL for an HTML document containing an <applet> tag, or
- A Scrapbook clipping that contains either a URL for an HTML document containing an <applet> tag or an <applet> tag.

Note: You must have an active Internet connection to use applets at remote URLs.

Tips for Using MRJ

OpenDoc

If you do not have OpenDoc installed when you install MRJ 1.0.2, the Apple Applet Viewer will not be installed. If you install OpenDoc later, you must reinstall MRJ to use the Applet Viewer.

Memory Usage

MRJ uses system memory to run Java applets and applications. Applications allocate their own application memory, leaving less memory available to the system. If an application that uses MRJ (such as the Applet Runner or Cyberdog) is using an especially large amount of memory, you may have trouble running large Java applets or applications. If you encounter problems, try quitting applications you are not using. If you still cannot run the applet or application, try reducing the amount of memory used by the application that is using MRJ.

To reduce an application's memory size, first quit the application, then select the application's icon and choose Get Info from the File menu. Type a smaller number in the Preferred Size field. (However, do not set the preferred size smaller than the indicated minimum size.)

Known Problems

You must restart your computer after installing MRJ. If you attempt to run MRJ without restarting, MRJ may behave in unexpected ways.

Do not remove the Text Encodings folder from the System Folder or the Text Encoder Converter file from the Extensions folder. Removing these items may cause problems while using

MRJ or using
other applications requiring these files.

In pre-release versions of MRJ, the preferences file was named Applet Runner Prefs. If you had a pre-release version of MRJ installed, make sure you throw the Applet Runner Prefs file away. (The old file may conflict with preference files created by applet runner applications from other companies.)

There is a known problem with the PPCExceptionEnabler extension. This extension is installed by Macintosh Common Lisp (MCL) 3.9. If you have this extension, you must remove it before running MRJ. Future versions of MCL will not require this extension.

There are known problems with some applets when using MRJ 1.0.2 with Microsoft Internet Explorer, including display problems, sound problems and possible crashes. We are working with Microsoft to resolve these problems in a future release of Internet Explorer.

If you are running applications or applets compiled with the JavaSoft 1.0.2 JDK release for Macintosh, you may encounter numerics-related problems. Specifically, floating-point constants (and in some cases computed integer constants) may not be accurate. If possible, use another Java compiler to recompile any applications or applets displaying this problem.

If all the images and sounds an applet uses do not appear, there may not be enough memory available for all the images and sounds. You may be able to free up memory by quitting all applications (such as the Apple Applet Runner and Apple Applet Viewer) that use MRJ. If necessary, try quitting other applications as well. After quitting the applications, try reopening Apple Applet Runner or Apple Applet Viewer. See Memory Usage above for additional information.

Some Java applets (such as Clock) or applications that are processor intensive may cause other applets to open or run slowly, or may cause them not to open at all. To improve performance, try closing applets or applications that you are not using.

The Apple Applet Viewer does not report some errors. If an applet does not open in Apple Applet Viewer, try opening it with Apple Applet Runner to see if an error message appears.

Further Information and Reporting Problems

See our Web site at <http://applejava.apple.com/> to find out about future releases of Mac OS Runtime for Java or get information on how to report problems with the software.

Other Applets on the Internet

There are thousands of applets available on the Internet. Two good starting points for finding applets are <http://www.javasoft.com/> and <http://www.gamelan.com/>.

Software Development Kit Available

A software development kit (SDK) is available for MRJ 1.0.2. The MRJ SDK includes interfaces to the runtime environment that allow software developers to:

- run Java applets and applications within a Macintosh application
- access the Java runtime from a Macintosh application
- call Java methods from C and C++
- call native methods from Java
- build standalone Java applications

The SDK also includes a utility to run Java applications.

See our Web site at <http://applejava.apple.com/> to get the MRJ SDK.

Java not fault-tolerant

The Java technology is not fault-tolerant and is not designed, manufactured or intended for use or resale as on-line control equipment in the operation of nuclear facilities, aircraft navigation or communication systems, or air traffic control machines in which the failure of the Java technology or Mac OS Runtime for Java could lead directly to death, personal injury, or severe physical or environmental damage.

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