Release Notes

Java Card API 2.0
Reference Implementation
Developer's Release 2

20 February 1998

JavaSoft, Inc.
A Sun Microsystems, Inc. Business
2550 Garcia Avenue
Mountain View, CA 94043-1100 USA
650 960-1300 fax 650 969-9131

Revision 01, February 20, 1998

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1. Introduction

This document contains the release notes for the Java Card API 2.0 Reference Implementation Developer's Release 2, also known as JC2RI-DR2.

The Java Card applet programmer can use the JC20RI-DR2 to:

- Develop and debug a Java Card applet.
- Validate the Java Card applet for the Java Card language subset conformance using the Java Card Checker.
- View sample Java Card applet code for Java Card 2.0 API usage hints.
- Run and exercise sample Java Card applets on a workstation.

The Java Card API 2.0 Reference Implementation runs on a workstation using a Java Virtual Machine (VM).

For more details on the reference implementation, please refer to the *Java Card 2.0 Reference Implementation User's Guide*.

What is a Developer's Release? The purpose of distributing a Developer's Release (DR) is to provide a timely incremental release to enable your development activity. A DR is pre-released software, which is subject to change. The first Developer's Release was distributed to licensees for review.

1.1 Contents of JC2RI-DR2

The JC2RI-DR2 release contains:

- Java Card 2.0 Reference Implementation Developer's Release 2.0
- *Java Card 2.0 Reference Implementation User's Guide*
- Sample applets
- The Java Card Checker
- *Java Card Checker User's Guide*

The *Java Card Applet Programmer's Guide* will soon be available. This guide provides a brief overview on smart cards and also explains how to use the Java Card API 2.0 Specification in a Java Card applet.

Also included is a file, JC20API-update.pdf, that contains proposed updates for the Java Card API 2.0 specification. Java Card licensees are currently reviewing these minor updates.

2. Installation Notes

The JC2RI-DR2 release has been tested on Win95, Win NT 4.0 and SunOS systems. It should work on other operating systems, but it has not yet been tested on other platforms.

It is necessary to have the Java runtime environment installed on your workstation and that your path and CLASSPATH environment variables have been set up correctly. Your PATH should include `java` executable. Your CLASSPATH should include the standard java class files.

2.1 Installation Procedure

Unzipping `JC20RIDR2-P.zip` creates a new directory named "JC20" in which all the files are located.

3. Quality Assurance

3.1 Testing

The JC2RI-DR2 release has been installed and tested on SunOS with JDK 1.14 and Win95 and Win NT 4.0 systems with Symantec Visual Café Professional Development Edition 2.0 (JDK 1.1.3).

3.2 Known Problems

3.2.1 Known Problems in the Reference Implementation

javacard.framework.Applet

1. The return boolean value from the `select()`method is ignored. The applet will be selected for APDU processing.
2. If an exception is thrown in the `select()` method, the default applet will be selected and the `process()` method of the default applet will be invoked with the incoming `APDU`.

   Note: that the default applet has AppID=1 (the first applet param in the command line argument).

javacard.framework.Dispatcher

3. `SELECT` APDU processing: No restrictions are currently enforced on the length of the AID byte array.

The applet firewall

4. The applet firewall is not simulated in the reference implementation.

Invoking Applet methods:

5. The mechanism used by the `dispatcher` and `JCRE` classes to reach across the firewall to invoke Applet methods is not demonstrated in the Reference Implementation.

Transient Objects

6. The behavior of transient objects is not simulated. To simulate the effect of transience, an applet must reset the contents of these objects at appropriate times.