Java HID API for Windows, Linux, and Mac OS X

About

Java HID API is JNI wrapper allowing using HIDAPI library from Java code. HIDAPI is a multi-platform library which allows an application to interface with USB and Bluetooth HID-Class devices on Windows, Linux, and Mac OS X.

License

This code is base on open-source implementation and is governed by variety by licenses as described in LICENSE.txt file. In particular

HIDAPI can be used under one of three licenses.

1. The GNU Public License, version 3.0, in LICENSE-gpl3.txt
2. A BSD-Style License, in LICENSE-bsd.txt.
3. The more liberal original HIDAPI license. LICENSE-orig.txt

The license chosen is at the discretion of the user of JavaHIDAPI. For example:

1. An author of GPL software would likely use JavaHIDAPI under the terms of the GPL.
2. An author of commercial closed-source software would likely use JavaHIDAPI under the terms of the BSD-style license or the original JavaHIDAPI license.

Download

The project is hosted at and could be downloaded from http://code.google.com/p/javahidapi/
The project site includes issue tracking system where you can submit your bug reports.

Build Instructions

Windows

To build you need to have Microsolt Visual Studio 2008 (We used version 9.0.21022.8 RTM).

Build the .sln file in the windows/ directory. This will build *hidapi-jni.dll* in *windows/release* an *windows/debug* folders.

Linux

RedHat Enterprise Linux 6

You need to have following libraries/packages installed:

1. libudev
2. libudev-devel
3. libusb1
4. libusb1-devel-1.0.3-1.el6.i686

Ubuntu 11.10

You need to have following libraries/packages installed:

1. libudev
2. libudev-dev
3. libusb-1.0-0-dev

To compile source code use following commands:

make -C linux
ant

Mac OS X

To build under MacOS you need to have following libraries/packages installed:

1. iconv
2. apache-ant

The recommended way to install is using MacPorts.
To compile source code use following commands:

make -C mac
ant

Running Example

Running command 'ant run' will print you list of currently connected HID devices. After this it would run and print notifications about newly plugged or unplugged HID devices. To stop the program press *Ctrl^C*.

Java API Overview

JavaHID API provides simple cross-platform Java API for working with HID devices. For full API reference please see *doc/api* folder in source distribution. All API classes are contained in *com.codeminders.hidapi* package.

Before using API you must subclass *HIDManager*. You need to implement two callback methods: *deviceAdded* and *deviceRemoved*. These methods are called in separate thread when new HID devices are added or removed from the system. If you are not interested in receiving device addition/removal notifications then empty implementation will suffice. *HIDManagerTest* class included in source distribution is a sample implementation which prints notification messages on standard output.

After instantiating an instance of HIDManager subclass you can use some of its methods:

The method *listDevices* returns list of currently found HID devices. Each device is represented by *HIDDeviceInfo* class instance which contains information about the devices. Please refer to API documentation for list of fields. This datat stucture is merely an information about device, to open it you need to call *open()* method on it.

HIDManager also provides a couple of convenience methods for quickly finding and opening devices either by path (*openByPath*) or by vendor id/product id/serial number (*openById*).

Each open device is represented by HIDDevice instance. If device is opened multiple times the returned instances of HIDDevice wil be equals (using Java *equals* method). However thread-safety is not guaranteed so you need to serialize access to it using standard Java synchronization primitives. Please see API reference for details on methods of this class.