Raspberry Pi - Bluetooth using Bluecove on Raspbian

Introduction

I want to cover what exactly people will need to use a bluetooth dongle on a Raspberry Pi and interact with it using Java. I assume, you've already written a program on your Windows PC and it works using Bluetooth on there. (I'm not going to cover the ins and outs of Java programming with Bluetooth.) What I will cover is how to get said program running on the Raspberry Pi.

I also assume you know how to use SSH to your pi via the use of a client such as Bitvise SSH Client.

Requirements

At the time of writing this post, I'm using a Raspberry Pi Model B with the lastest version of Java installed and all updates applied to my Pi.

I have a generic USB Bluetooth adapter that I bought from Maplin. (Chosen because of its small size.)

A 32gb SD card. (You will get by with the minimum reccomended size, I think it's 4gb.)

A power supply.

Installation

You will need to install the bluetooth components on your Raspberry Pi, you can do this by running the following commands.

Update package lists:

```
Sudo apt-get update
```

Update packages

```
Sudo apt-get upgrade
```

Auto-remove redundant packages

```
Sudo apt-get autoremove
```

Install new bluetooth packages

```
Sudo apt-get install bluetooth bluez-utils blueman
```

You should now have a bluetooth service installed on your Raspberry Pi, You can check the service using the below command.

```
/etc/init.d/bluetooth status
```

And you can scan for bluetooth devices using this command.

```
hcitool scan
```

Updating your application libraries

Chances are, your application uses the Bluecove libaries. An oh look, your application won't run on your Pi because the libraries are not compiled to run on an ARM processor.

1) Now you need to compile your own Jar with the ARM binaries so that it will run on your Raspberry Pi. (Not many sites provide the jar, they make you compile it yourself, so I've done that and provided a zip with the jars pro-compiled. - Scroll down if you're lazy and don't want to compile your own.)

2) You will need to create a folder on your Pi lets call it '/home/pi/temp'.

3) Browse to the new temp folder

```
cd /home/pi/temp
```

4) Download the source from the Bluecove SVN using this command:

```
wget -m -np http://myproject.googlecode.com/svn/myproject/trunk/
```

A usefull page if you get stuck with this would be this Stack Overflow question page.

5) now you should have all the files in your temp dir. You can list the structure by trying:

```
ls
```

6) Compile all the projects within the download. Bluecove, Bluecove EMU and Bluecove GPL. Browse to the project folder using the cd command previously explained and build the project using this command:

```
ant all
```

You will find your new jars within a new target folder created within each of the project folders. (You need to compile each project separately.)