

## Lock Screen BlueTooth Java Desktop PoC Assembly Deployment Guide

### Revision History

Author	Revision Number	Date
TCSASSEMBLER	1.0	2014/7/21

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## Deployment Instructions

**1. Organization of Submission**

**conf** – this directory contains the configuration files needed by the application.

**docs** – this directory contains documents needed for this application. One of the documents that you may find here is this deployment document.

**lib** – contains the libraries needed for this application.

**src** – contains source files for the implementation of requirements for this competition.

**build.properties** – configuration file for the ant build. Contains configurable properties that can be modified if desired.

**build.xml** – ant build files.

**2. Application Setup**

- Oracle JDK 6u45
- Ant 1.8+
- Windows7
- BlueTooth device
- Phone with Android and IOS
- BlueCove 2.1.1 <http://www.bluecove.org/>
- JNA 4.1.0 <https://github.com/twall/jna/>
- Log4j 1.2.17 <http://logging.apache.org/log4j/1.2/>

**3. Build Scripts Setup**

**build.properties** – listed here are the properties that you may need to modify to properly run the compilation and deployment of the application.

Variable	Sample	Description
jar.name	LockScreen.jar	The jar name.
mainClass	lockscreen.poc.MainFrame	The main class name.
pin	111111	the pin code
checkDevicesInterval	30000	the check devices interval the unit is milliseconds
failedTimes	2	if fail defined times it will lock screen.

The configuration is done in the **conf/app-template.properties**.

When you package application as jar it will read values from **build.properties** and rename to **app.properties** and copy to **dist** folder.

Variable	Sample	Required	Description
pin	@pin@	no,default value is 111111	the pin code
checkDevicesInterval	@checkDevicesInterval@	no,default value is 30 * 1000	the check devices interval the unit is

			milliseconds
failedTimes	@failedTimes	no,default value is 2	if fail defined times it will lock screen.

You can find below ant targets in **build.xml**

Target name	Description
<b>clean</b>	Clean build folder.
<b>compile</b>	compile java sources
<b>jar</b>	package application as jar
<b>run</b>	run the jar

## 4. Window Setup

4.1.1. Make sure your computer exists **windows7** OS and Bluetooth device.

4.1.2. Download JDK 6u45 from <http://www.oracle.com/technetwork/java/javase/downloads/java-archive-downloads-javase6-419409.html#jdk-6u45-oth-JPR>

4.1.3. Download Ant 1.8+ from <http://ant.apache.org/bindownload.cgi>

## 5. Deployment Instructions

Step 1: Follow section 4 to setup windows.

Step 2: Modify **build.properties** to match your configuration.

Step 3: Run **ant jar** to package application as jar.

You can find generated jar in **dist** folder

## 6. Verification

Because it exists many bluetooth devices but I can just test on limited devices and sometimes the used framework may not work.

For example

**BlueCove 2.1.0** not work on **windows7 64** with **JDK 6 64 bit**

<https://code.google.com/p/bluecove/issues/detail?id=109>

So I change to use **BlueCove 2.1.1 SNAPSHOT**.

I verify on below computers/devices.

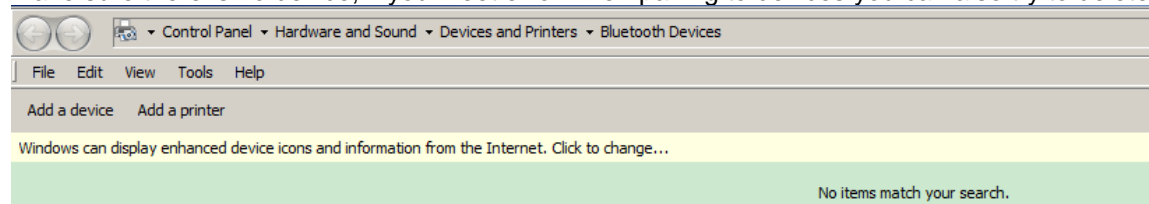
Computers with **windows7 64 sp1** with **32/64 JDK 6u45** with built in/USB Bluetooth device.

**XIAO MI 2S** with **Android 4.4**

**IPAD 2** with **IOS 7.1.2**

Before verification right click on **Bluetooth icon** in taskbar and click **Show Bluetooth Devices**

Make sure there is no device, if you meet error when pairing to devices you can also try to delete it here.



If you **meet any error when pairing device** please click on **Bluetooth icon** in taskbar and click **Add a device** and could add device successfully.

Currently If you **pair device once** it will **still show in device list even if the device is not available**(restart application will not remove it from list) so you need to manually remove in above explorer.

6.1. Verify on Computer without bluetooth devices.

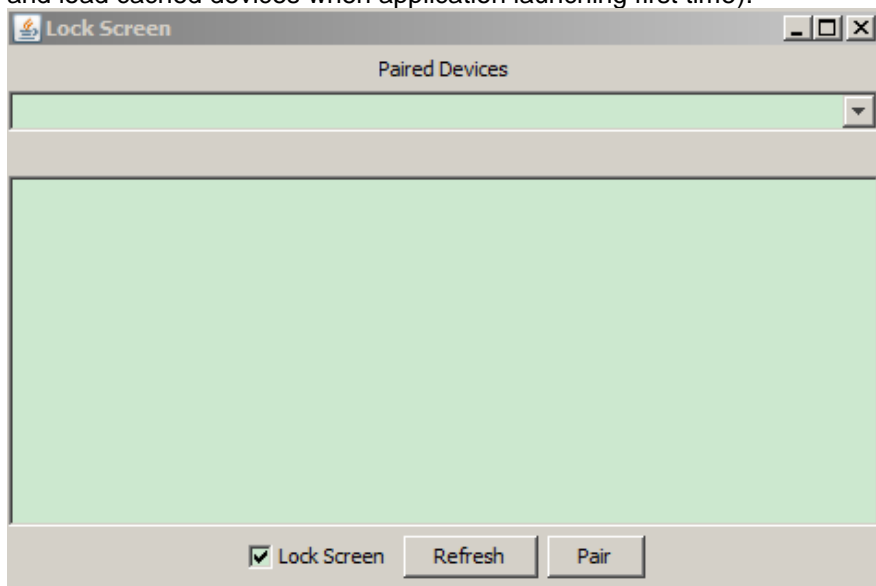
It will just show error dialog when run on computer without bluetooth device.



6.2. Verify on Computer with bluetooth devices.

You will find such dialog firstly you will not see any devices in list.

You can **wait** `checkDevicesInternal/1000`(defined in `app.properties`) seconds or **click refresh button** immediately to get latest devices list (currently it will click refresh button and load cached devices when application launching first time).



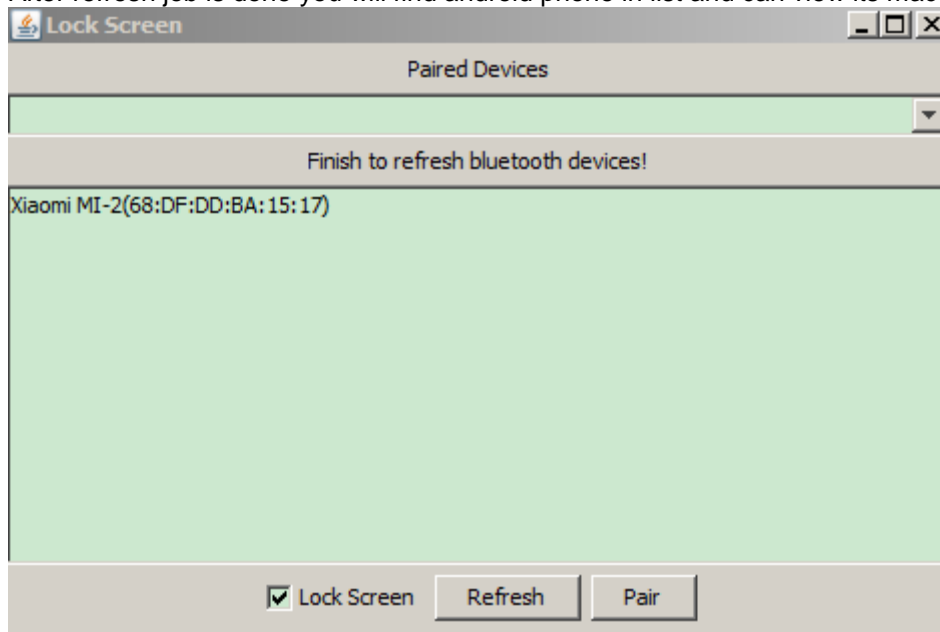
6.3. Verify by Android Phone

I test on **XIAO MI 2S with Android 4.4** actually.

First please turn bluetooth on your phone and make sure it is visible to nearby Bluetooth devices, after it is paired once it may be visible to paired devices only or not visible so please make sure change to be visible to public if you want to see or pair devices.



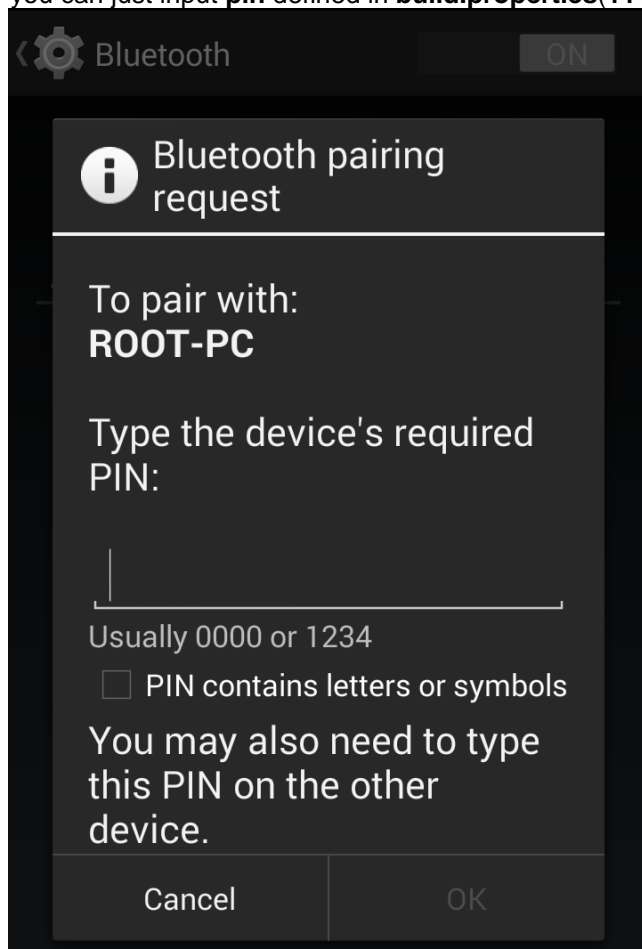
After refresh job is done you will find android phone in list and can view its mac address.



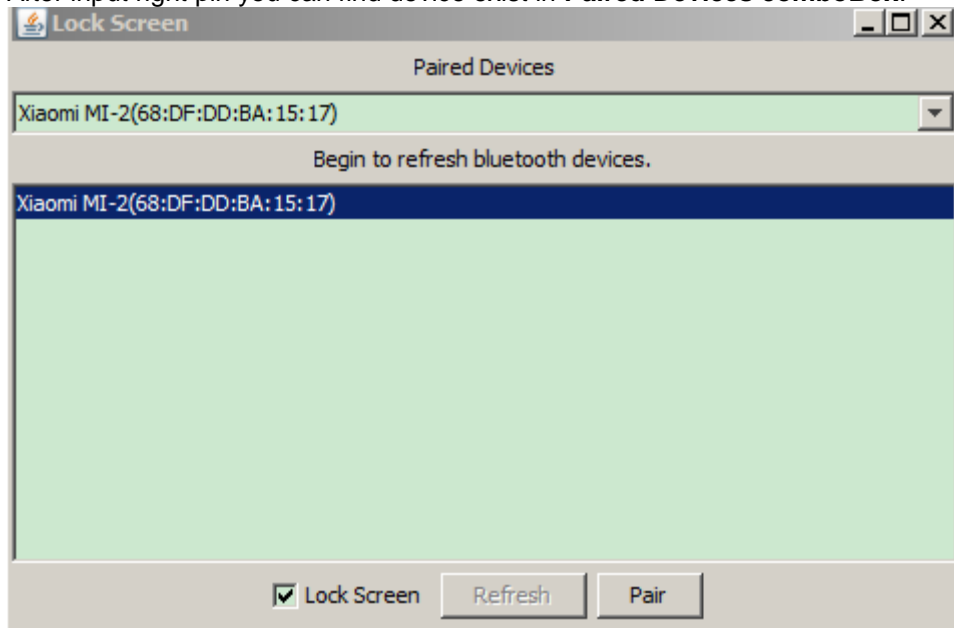
Now you can click **Pair** button

During my verification If I use **USB bluetooth device**

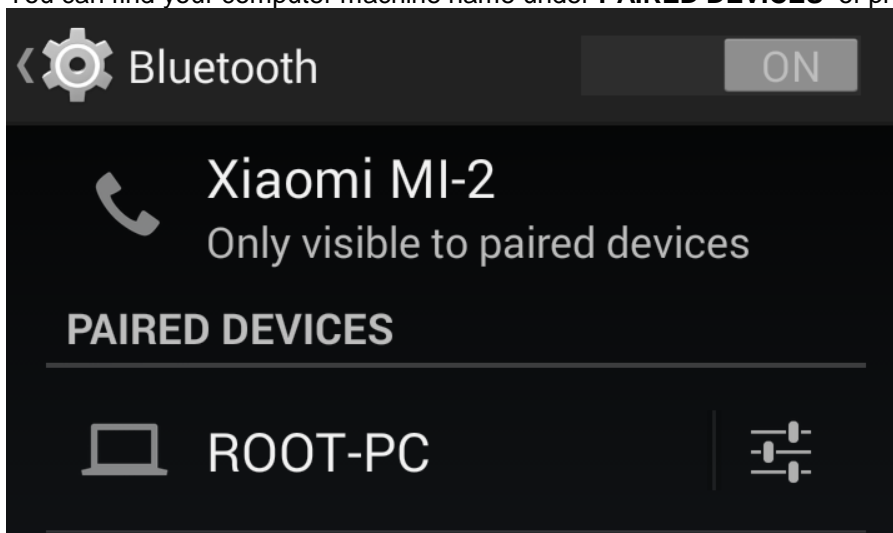
you can just input **pin** defined in **build.properties**(111111 if you not change)



After input right pin you can find device exist in **Paired Devices** comboBox.



You can find your computer machine name under **PAIRED DEVICES** of phone



If I use **built in** bluetooth device  
you can just input pin with **random number** after click pop dialog in windows



Add a device

### Compare pairing codes between your computer and this device

This will verify that you are connecting to the correct device.

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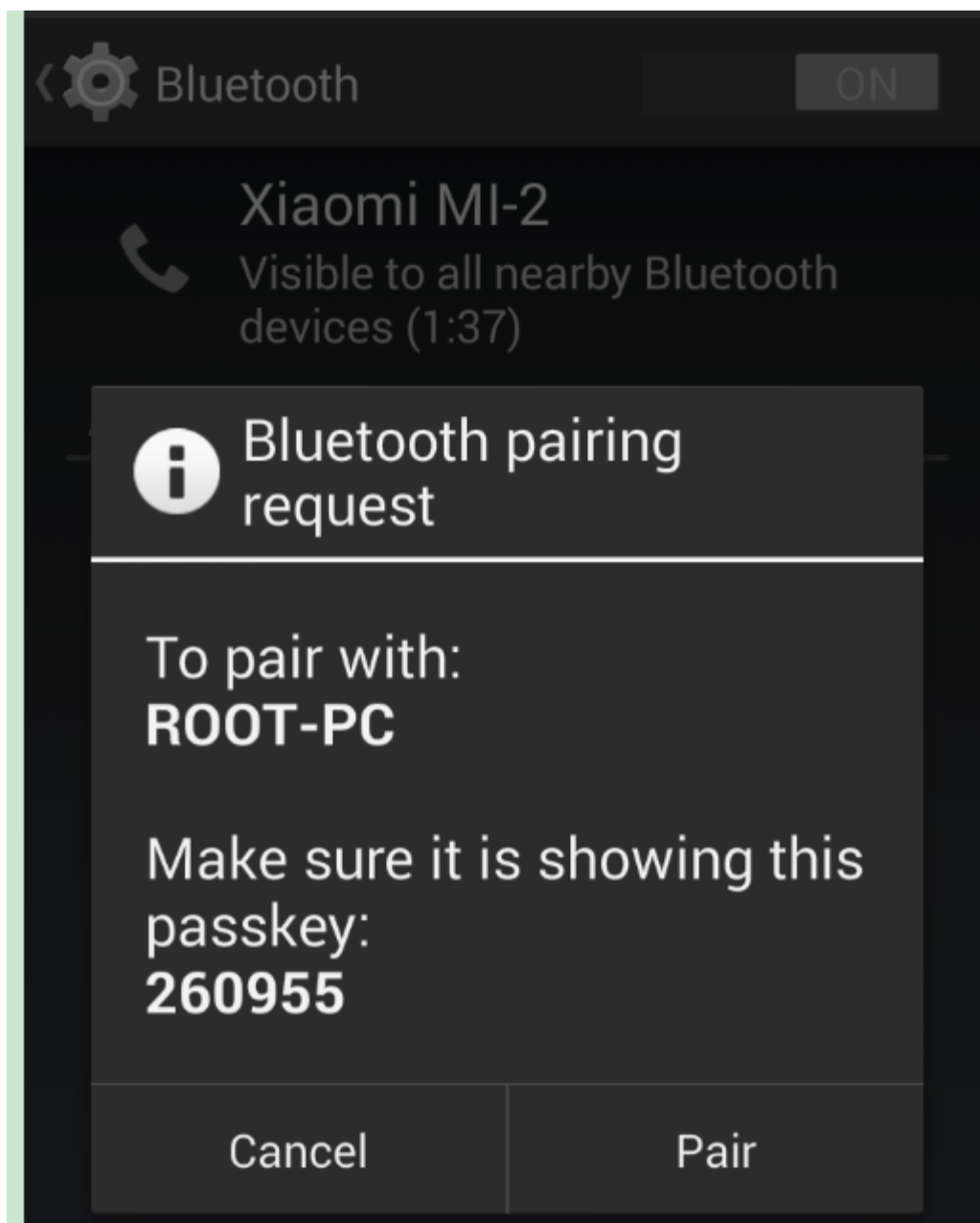
Does the code above match the code on the device:

- ☒ Yes
- ☐ No
- ☐ The device is not displaying a code



Xiaomi MI-2





If you check **Lock Screen** and turn off Bluetooth on your phone  
Wait for refresh job to finish and you will find your computer is locked.

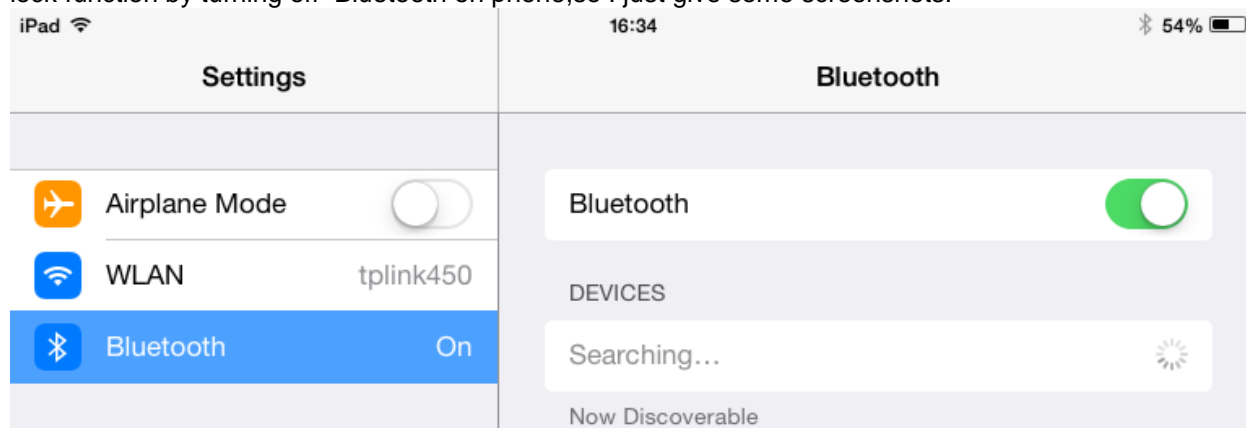


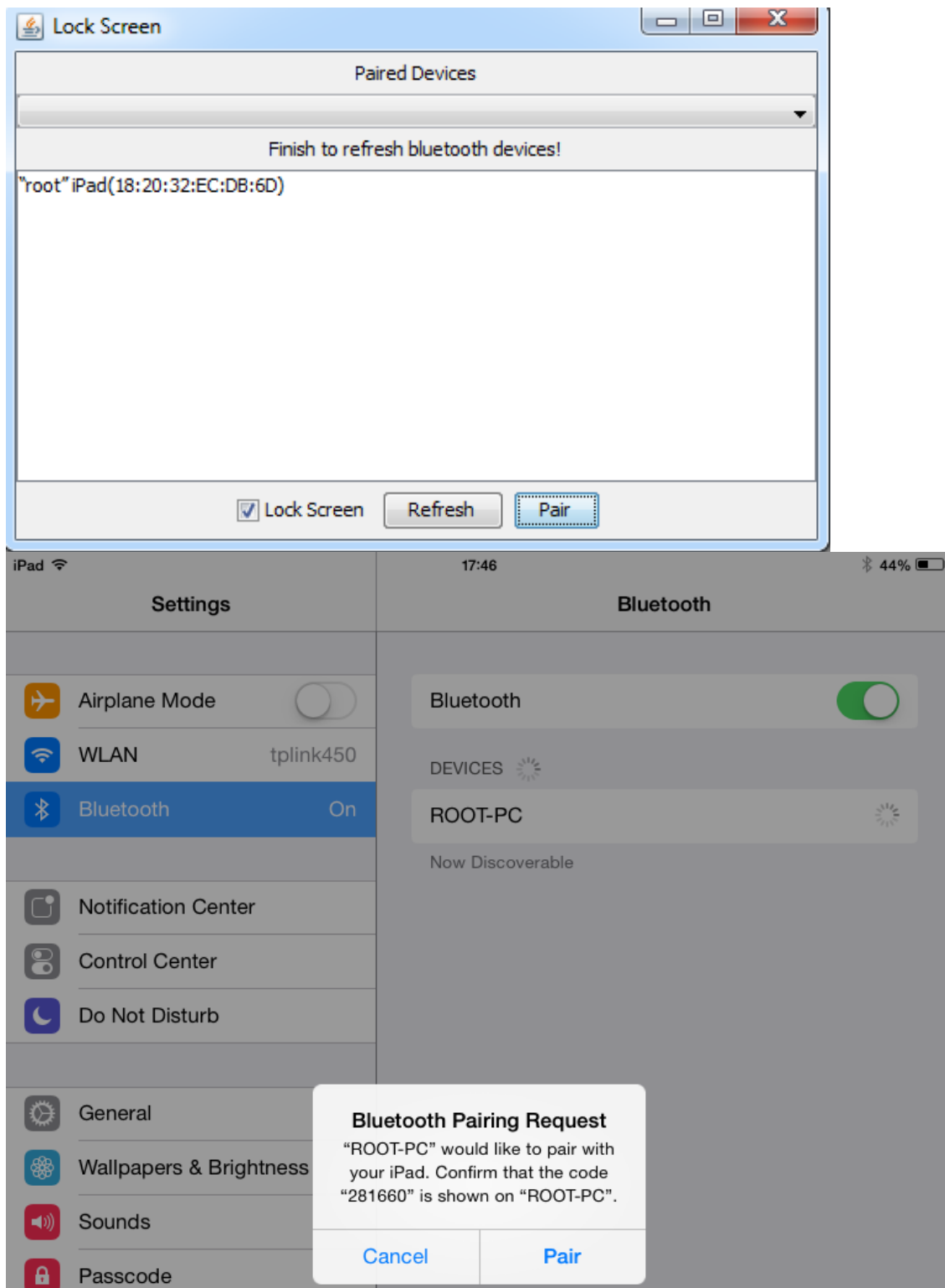
#### 6.4. Verify by IOS Phone

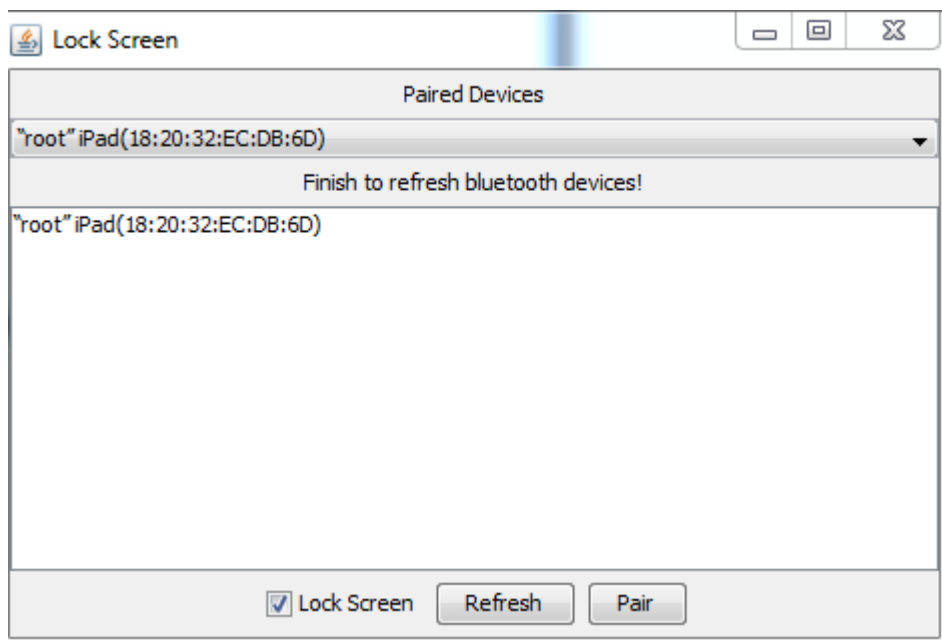
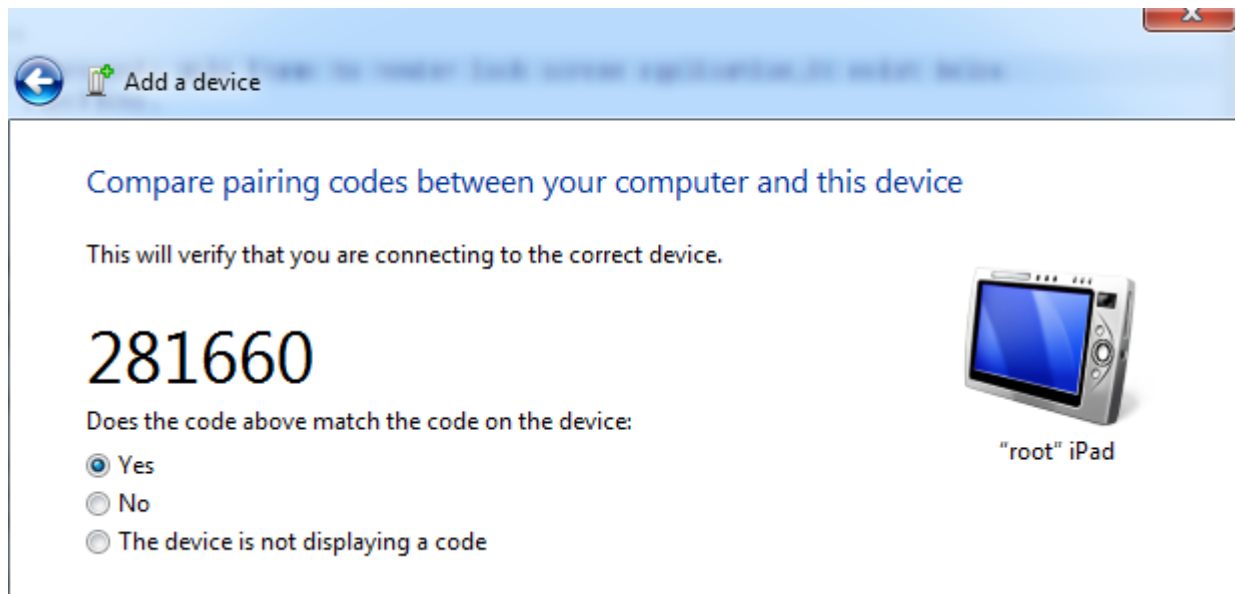
I test on **IPAD 2 with IOS 7.1.2** actually.

The operations are similar to phone with android.

Firstly **turn on Bluetooth on phone** and make sure **device is visible to nearby devices**, secondly after device is show on list, pair device with pin code, if pair successfully just test lock function by turning off Bluetooth on phone, so I just give some screenshots.



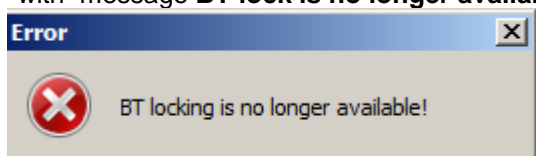




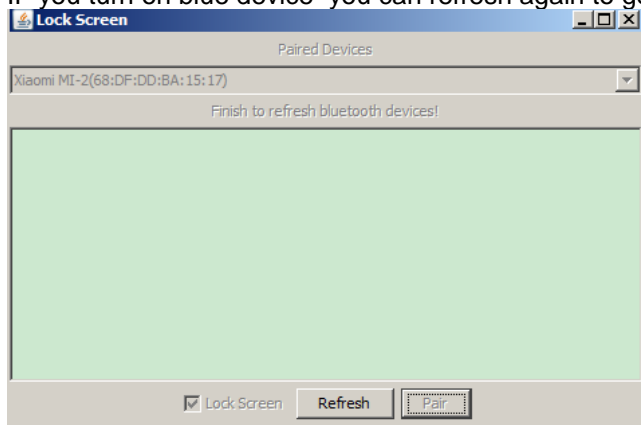
If you check **Lock Screen** and turn off Bluetooth on your phone/ipad. Wait for refresh job to finish and you will find your computer is locked.



- 6.5. Verify with Bluetooth device turned off on computer.  
During verification if you turn off Bluetooth device on computer you will see error dialog with message **BT lock is no longer available!**.



IF you turn on blue device you can refresh again to get device list.



## 7. Resource Contact List

Name	Resource Email
TCSASSEMBLER	