IOReceiver Interface Tutorial

This tutorial shows how you can use the IOReceiver interface.
IOReceiver interface is meant to allow users to get updates on the desired monitored internal device (touchscreen , keypad, ...)

To receive the updates you need to:

1. Create a class that implements the mswat.interface.IOReceiver
2. Implement the interface methods
    a. registerIOReceiver – this method is meant to register the IOReceiver in the system. To do so use

```
@Override
public int registerIOReceiver() {
    return CoreController.registerIOReceiver(this);
}
```

    b. onUpdateIO(device, type, code, value, timestamp) – this method will receive all the IO updates from the system. Where device is the id of the monitor device and the rest are the raw values provided from the device.
    c. onTouchReceived(type) – implement this method if you want to allow control over wifi. It receives the type of touches available to send over wifi. (Touch types are defined in mswat.touch.TouchRecognizer)

3. When you start the registering process is up to you; In this example we will start when the mswat finish the calibration process. Mswat broadcasts a init signal when it finish the calibration/initialisation process
    a. To do so start by extending the class BroadCastReceiver
    b. Implement the class method and check for the mswat init signal
    c. When the signal is received register the IOReceiver

```
@Override
public void onReceive(Context arg0, Intent intent) {
    if (intent.getAction().equals("mswat_init")) {

        // register receiver
        registerIOReceiver();

    }

}
```

    d. Now make sure you register the broadcastReceiver in your Android manifest

```
<receiver
    android:name="tutorials.IOReceiverTutorial"
    android:enabled="true" >
    <intent-filter>
        <action android:name="mswat_init" />
        <action android:name="mswat_stop" />
    </intent-filter>
</receiver>
```

4. Now you will receive all the IO updates of all the monitored devices.

By default no devices are being monitored as such you will also need to start the monitoring process when you register the IOReceiver. To do so you have 2 options:

- Call CoreController.monitorTouch() after registering the IO receiver, if the purpose is to monitor the touchscreen
- Manually select the device to monitor

To manually select the device SWAT provides two key methods

- CoreController.getDevices() – returns a String array of the devices
- CoreController.commandIO(command, index, state) – using the command CoreController.MONITOR_DEV we can select the desired monitor device by giving its index and desired monitoring state (true/false).

In this short example we select the device that contains keypad in its name to be monitored.

```
String[] devices = CoreController.getDevices();
for (int i = 0; i < devices.length; i++) {
    if (devices[i].contains("keypad")) {
        CoreController.commandIO(CoreController.MONITOR_DEV, i,
                true);
        break;
    }
}
```

You can try this example at tutorials/IOReceiverTutorial.