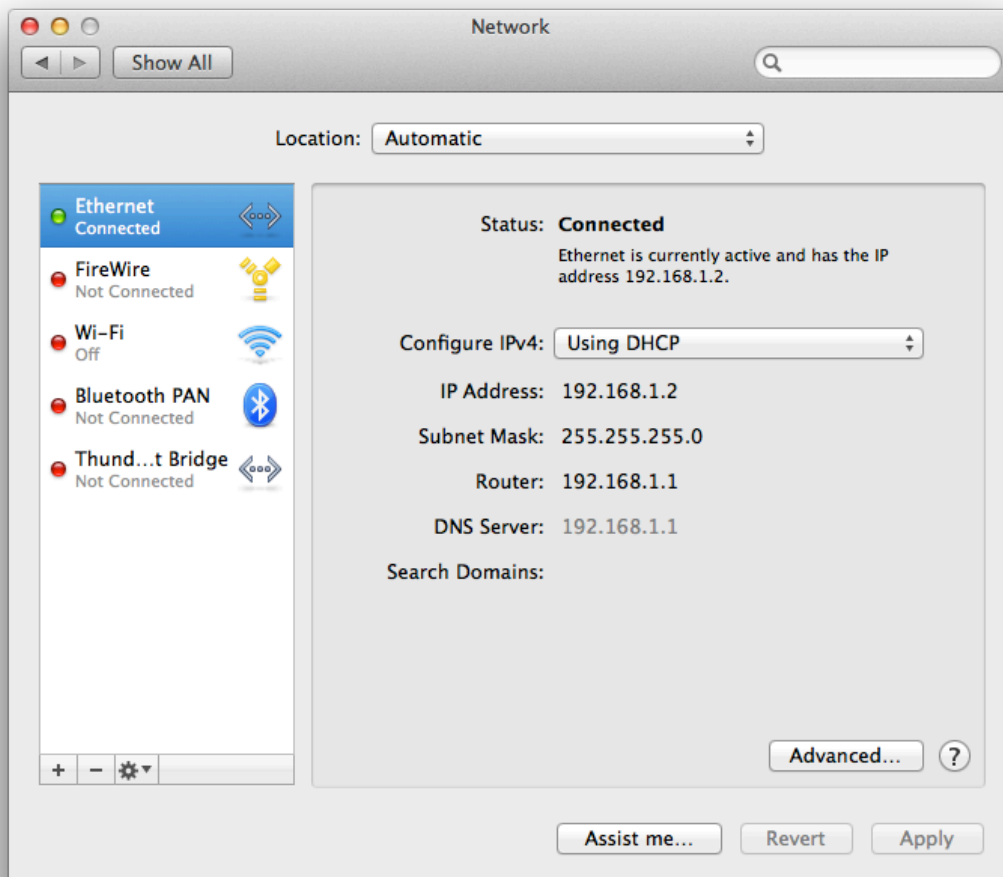# Communication between the computer and the Raspberry : IP setup

1 / Check out for the raspberry and the computer's IP

Turn off you wifi.
Connect the computer and the Raspberry Pi to the rooter, turn it on.
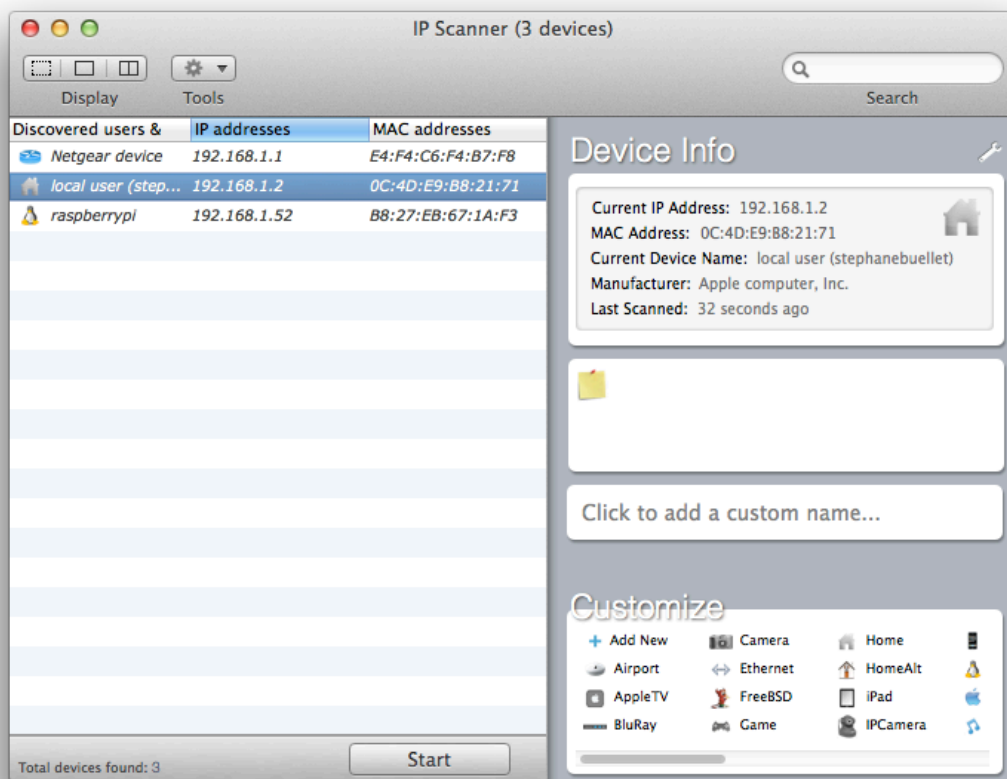Check if ethernet is connected (in mode "using DHCP")

Open IP Scanner and check the IP of the computer (local host) and the Raspberry Pi's IP.
Note the IP of the computer : in our example 192.168.1.2
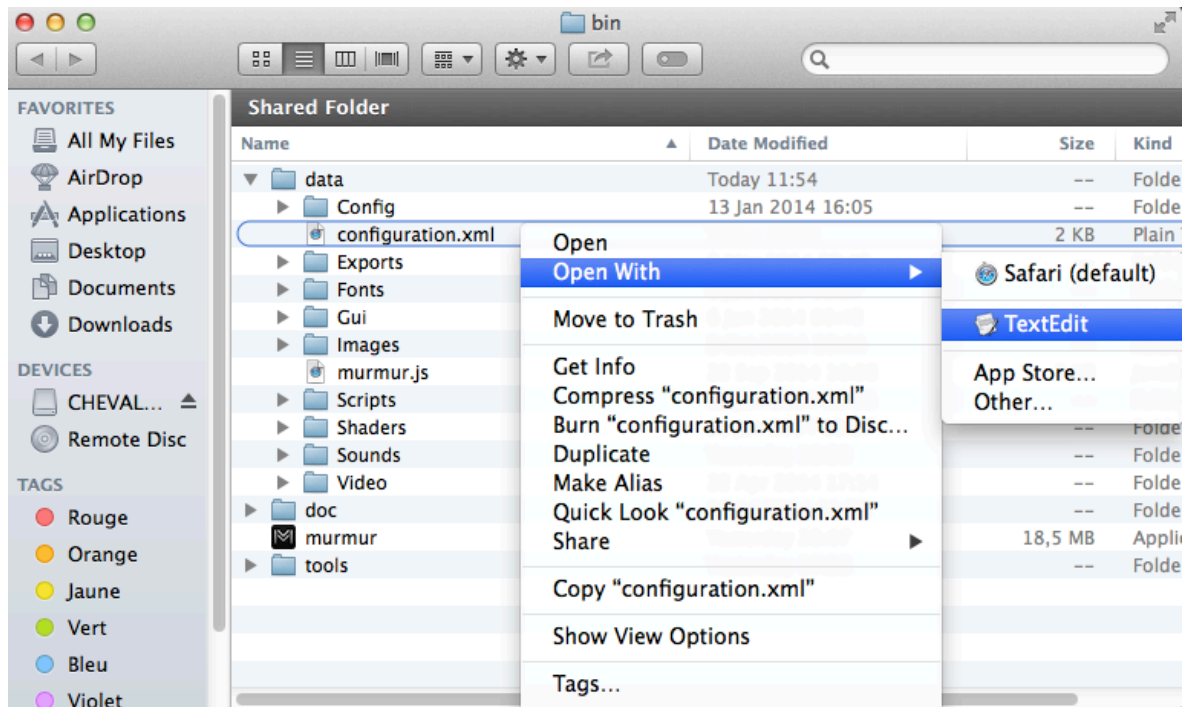Note the the IP of the raspberry : 192.168.1.52

2 / Point the IP address of the devices in the configuration.xml document

2.1 / In the computer :

Go to yourmurmurfolder/data/configuration.xml and open it with TextEdit

Edit this document putting the IP of your raspberry :


```xml
<murmur>
    <simulator>
    <!-- Activate or not simulation -->
    <enable>0</enable>

    <!-- Sound input for simulators -->
    <soundInput>
        <device>0</device>
        <nbChannels>1</nbChannels>
    </soundInput>

    <!-- Devices -->
    <devices>
        <device>
            <id>deviceEchoSimulator01</id>
            <nbLEDs>162</nbLEDs>
            <length>4.0</length>
        </device>
    </devices>
    </simulator>

    <!-- Sound output -->
    <soundOutput>
        <!-- check console for this value-->
        <driver>0</driver>
        <!-- check console for this value-->
        <nbSpeakers>16</nbSpeakers>
        <soundMain file="main.wav">
            <!-- list of speakers main sound is played on -->
            <speaker>0</speaker>
            <speaker>1</speaker>
        </soundMain>
    </soundOutput>

    <!-- MadMapper -->
    <madmapper>stereolux.mad</madmapper>

    <!-- Raspberry -->
    <launchDevices>
        <ip>192.168.1.52</ip>
    </launchDevices>
</murmur>
```
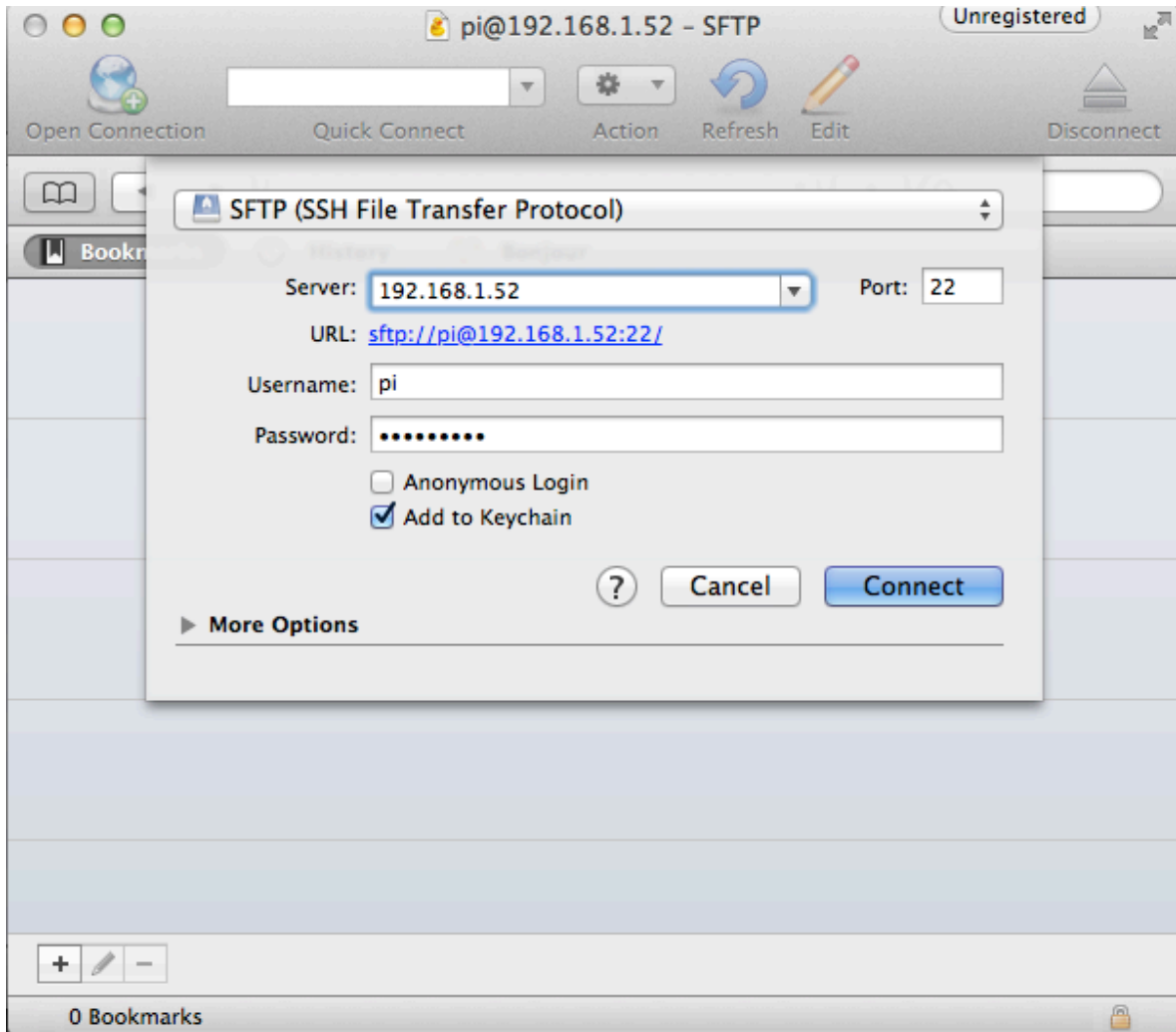
Save and quit

2.3 / In the raspberry :

Connect you to the raspberry through Cyberduck :
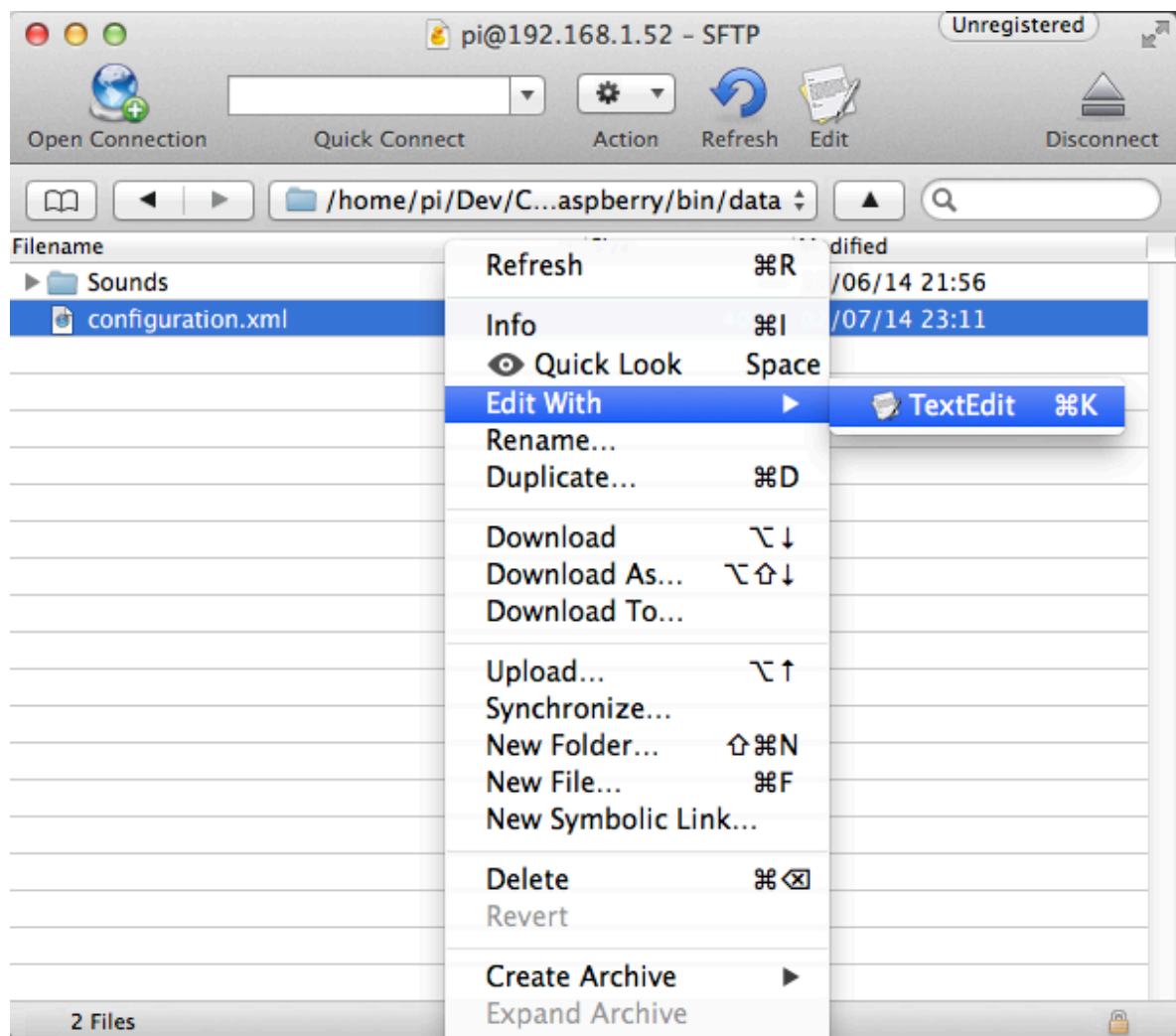Server : raspberry's IP
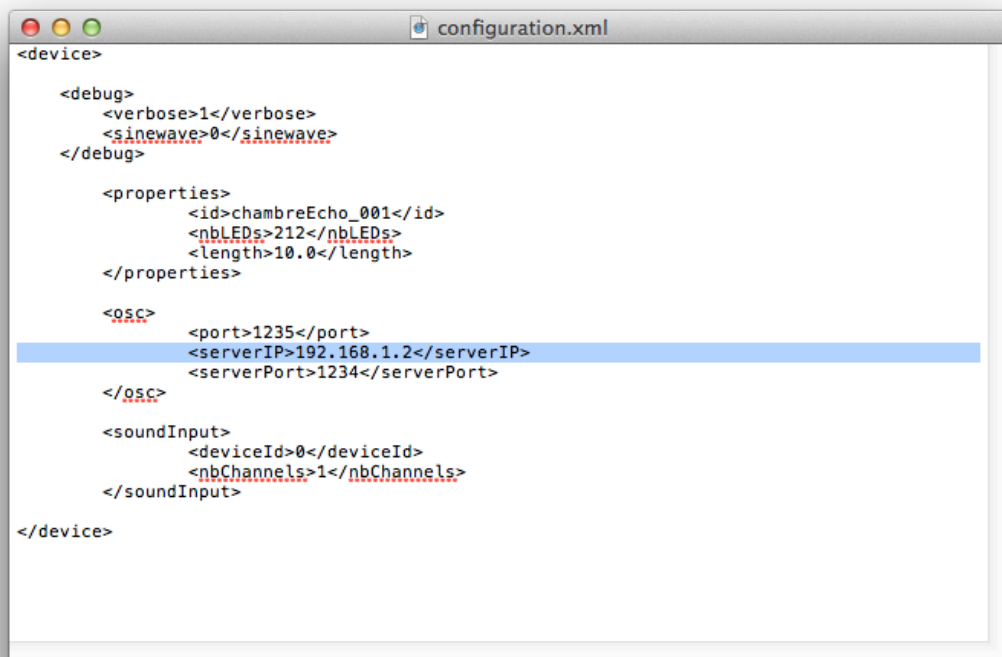username : pi
password : raspberry

go to pi/Dev/C/openFrameworks/examples/myapps/murmurRaspberry/
bin/data/configuration.xml
Right click + open configuration.xml with TextEdit

Put the IP of you computer (local host)

```
configuration.xml

<device>

    <debug>
        <verbose>1</verbose>
        <sinewave>0</sinewave>
    </debug>

        <properties>
                <id>chambreEcho_001</id>
                <nbLEDs>212</nbLEDs>
                <length>10.0</length>
        </properties>

        <osc>
                <port>1235</port>
                <serverIP>192.168.1.2</serverIP>
                <serverPort>1234</serverPort>
        </osc>

        <soundInput>
                <deviceId>0</deviceId>
                <nbChannels>1</nbChannels>
        </soundInput>

</device>
```
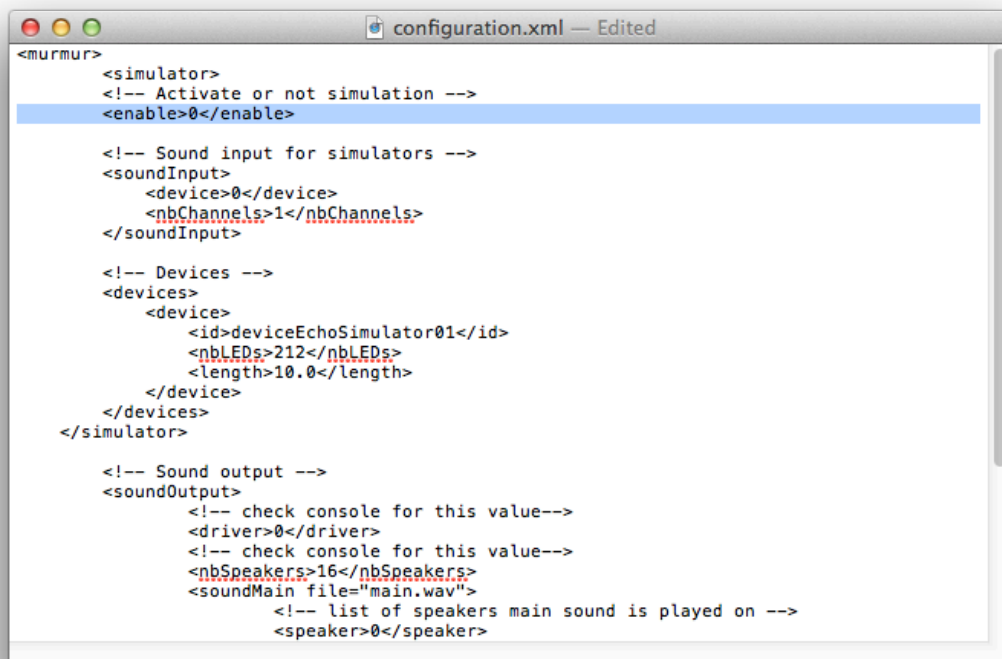
Save and quit.

Disconnect cyberduck, quit cyberduck.

Both the raspberry and the computer know the IP of each other, they can from now on communicate.

3 / Run Murmur App in installation mode

First disable simulation mode by choosing 0 in <enable>0</enable> within configuration.xml : yourmurmurfolder/data/configuration.xml

```xml
<murmur>
        <simulator>
        <!-- Activate or not simulation -->
        <enable>0</enable>

        <!-- Sound input for simulators -->
        <soundInput>
                <device>0</device>
                <nbChannels>1</nbChannels>
        </soundInput>

        <!-- Devices -->
        <devices>
                <device>
                        <id>deviceEchoSimulator01</id>
                        <nbLEDs>212</nbLEDs>
                        <length>10.0</length>
                </device>
        </devices>
        </simulator>

        <!-- Sound output -->
        <soundOutput>
                <!-- check console for this value-->
                <driver>0</driver>
                <!-- check console for this value-->
                <nbSpeakers>16</nbSpeakers>
                <soundMain file="main.wav">
                        <!-- list of speakers main sound is played on -->
                        <speaker>0</speaker>
```

Then run murmur, the strip led of the installation and the projection should now react to your voice both in the 3D scene and in the installation.