First day using Calico, Myro, Python and Scribbler Robots!

**Calico** is an INTEGRATED DEVELOPMENT ENVIROMENT (IDE). Find out more about it here: <http://calicoproject.org/>

**Myro** is a LIBRARY of commands that we can use to program robots. Find out more about using Myro with Calico here: <http://calicoproject.org/Calico_Myro>

**Python** is the LANGUAGE that we will be using this semester to create programs. It is named after the Monty Python TV shows. The official website for Python is <http://www.python.org/>

The **Scribbler** is a small, low-cost, programmable robot developed by Parallax. It has many sensors including light and distance sensors and a camera.

**Today we will put your patience, problem solving, and reading skills to the test…**

Firstly you should check to see if your robot has already been “paired” with your computer. To do this:

1. Click on the Bluetooth icon in the upper right of your toolbar
2. From the Bluetooth menu in the toolbar select "**Open Bluetooth Preferences…**"
3. Look for an item here that might match your robot. It could look like IPRE6-XXXXXX where XXXXXX is your Fluke’s serial number found on the white sticker on the IPRE Fluke board. Or, it could be called Scribbler. In one case, I have also seen one of our robots called Player2 so keep an eye out for that
4. If you see one that might be a match, turn on your robot and wait for it to beep so that it is ready to go
5. Select the device that you believe it might be
6. Click on the gear symbol and select “Edit Serial Ports”.
7. If the device proceeds to turn green and connect then you have found the correct one and you are ready to go – you just need to write down the Path for the device (shown at the bottom of the window, starts with /dev/tty…) then close the window and disconnect the device via the gear menu. Now skip the next set of steps and head to Calico. If the device did not connect then try any other possible devices and if not, follow the next set of instructions.

If your robot has not been paired yet you must add your Scribbler robot as a Bluetooth device on your computer using the instructions below:

1. Attach the IPRE Fluke to the scribbler
2. Turn on the scribbler
3. Click on the Bluetooth icon in the upper right of your toolbar, select "**Set up Bluetooth Device**"
4. Select the IPRE6-XXXXXX or scribbler where XXXXXX is your Fluke's serial number found on the white sticker on the IPRE Fluke board OR scribbler if you cannot find your robot number since it may have been renamed.
5. It will say that the pairing attempt was unsuccessful. Select **“Passcode Options…”** then enter the Passkey/PIN code **1234** as the specific code.
6. Once pairing is successful hit “**Quit**”.
7. From the Bluetooth menu in the toolbar select "**Open Bluetooth Preferences…**"
8. Highlight the IPRE6 bluetooth connection name for the robot that you just added
9. Select the **Gear** symbol at the bottom of the window and select “**Edit Serial Ports**”
   1. Add a serial port to the Fluke via the "+" button ONLY if you don't have one already
   2. Select the "Require pairing for security" button
   3. Write down the Path for the device (shown at the bottom of the window, starts with /dev/tty…) so that you can use that in your program.
   4. Click Apply
10. You should now have a device like "/dev/tty.IPRE6-XXXXXX-DevB" that is the serial port to the scribbler (some are slightly different… like “/dev/tty.scribbler-DevB).

Or you can refer to the video posted under the Video Tutorials section of the class Haiku page which documents the setup for our specific lab computers. After Bluetooth has been setup once you shouldn’t have to go back to that menu unless you are troubleshooting connection problems.

NEXT:

Find and open Calico (from the Applications folder)

Use the documentation at <http://calicoproject.org/Calico_Myro> as a guide to:

1. Connect to the robot (hint this is a two step process that involves importing Myro and initializing the connection to your robot which requires the path that you wrote down/saved earlier).
2. Change (set) the name your robot
3. Drive your robot around using the joystick command
4. Move your robot around using individual movement commands (ie NOT the joystick or gamepad)
5. Test out other interesting commands that you can find on the website.

As an additional resource you may refer to the “Learning Computing With Robots” textbook which is listed under the “Useful Resources” section of the class Haiku page.