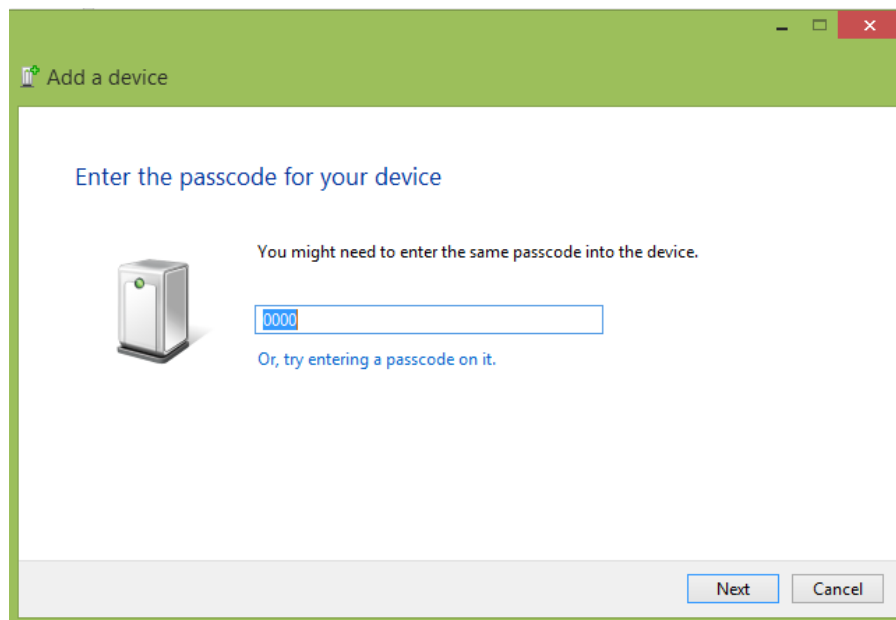
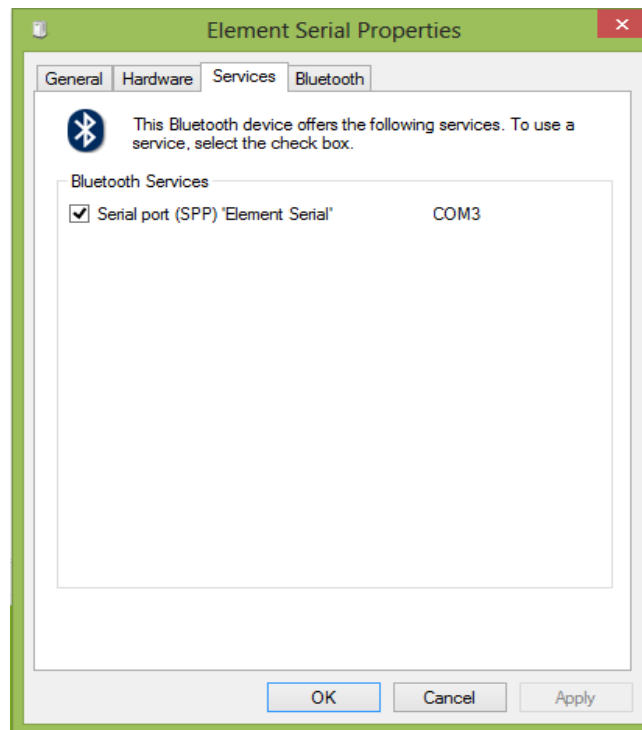


4. The Element Serial Bluetooth device will ask for a passcode. Enter **0000** in the passcode textbox. Click on **"Next"**.

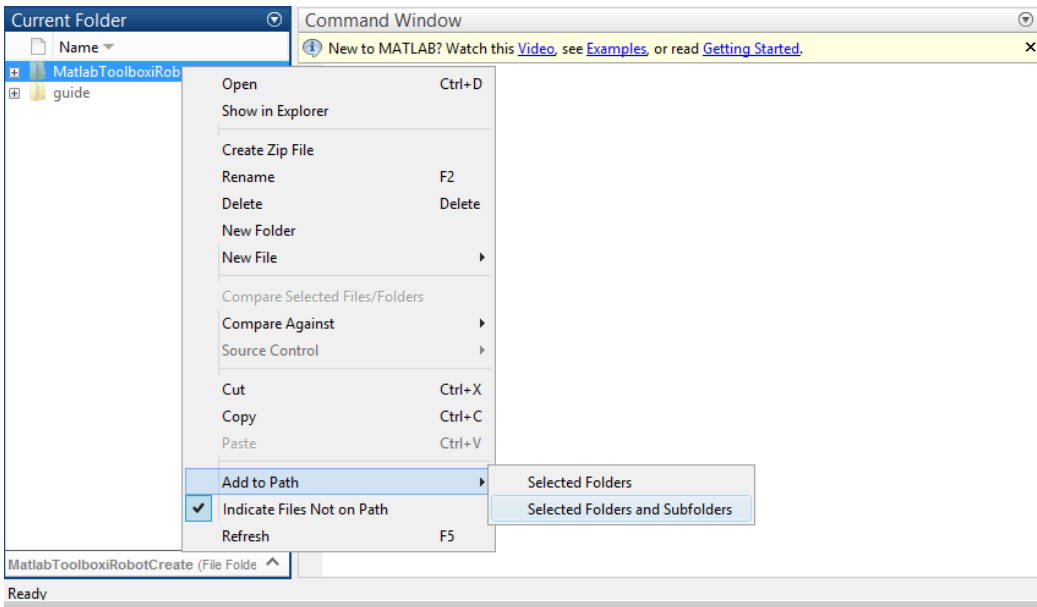


5. The windows will then begin to install the drivers for the Element Serial Bluetooth adaptor. Click on **"OK"** when this process completes.

6. Go to **Control Panel** → **Devices and Printers** → **View devices and printers**. Scroll down all the way to the bottom and you can see that the Element Serial Bluetooth device is present under the **“Unspecified”** category. Right click on the Element Serial and click on **“Properties”**. Under the **“Services”** tab, look below the **“Bluetooth Services”** where you will find the Serial Port of Bluetooth device. For example, **“COM3”**. Remember this port for your future reference. This is your iRobot Create Serial Port.



7. Open the MATLAB and navigate to the **“MatlabToolboxiRobotCreate”** folder.
8. Right click on the folder and go to **Add to Path** → **Selected folders and subfolders**.



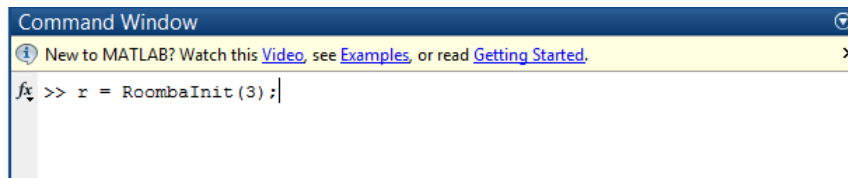
9. Then, in the command window, type

```
r = RoombaInit(iRobot Create Serial Port Number);
```

For example, in Step 6, our iRobot Create Serial Port was **'COM3'**. So, in our command window, we will write something like this:

```
r = RoombaInit(3);
```

Here, *r* is a variable called the **"serial port object"**. This variable has all the port numbers and settings through which we communicate to the iRobot Create.



10. If the connection is successful, we should hear 2 beep sounds and the 2 LED lights on the Roomba should flash on.

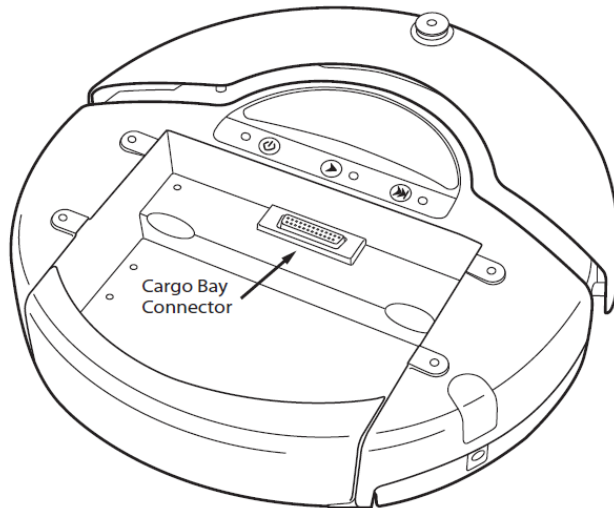
## Troubleshooting under Windows:

If you cannot connect to the iRobot Create, try the following steps:

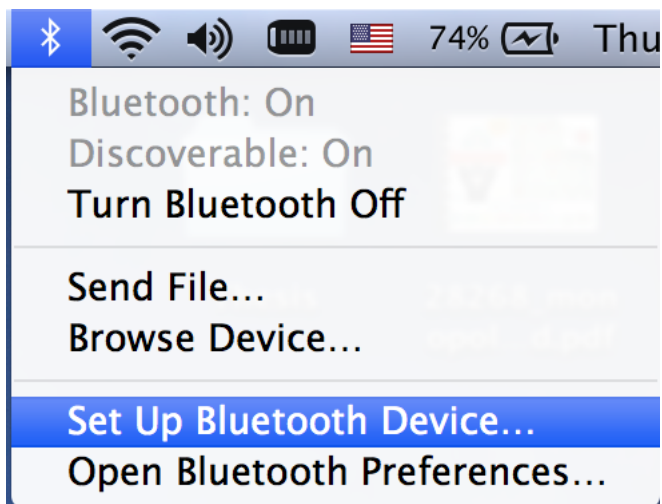
1. Close the MATLAB if it is open. If not, go to the next step.
2. Terminate the “Element Serial” Bluetooth device connection from the system by doing the following:
  - a. Go to **Control Panel → Devices and Printers → View devices and printers → Element Serial**. Right click on it and then press on **“Remove Device”**.
3. Switch off the Roomba.
4. Take out the Element Serial BAM from the cargo bay connector.
5. Put the Element Serial BAM back into the cargo bay connector.
6. Power on the Roomba.
7. Repeat the steps for connecting.

## Steps to Connect – Mac OSX

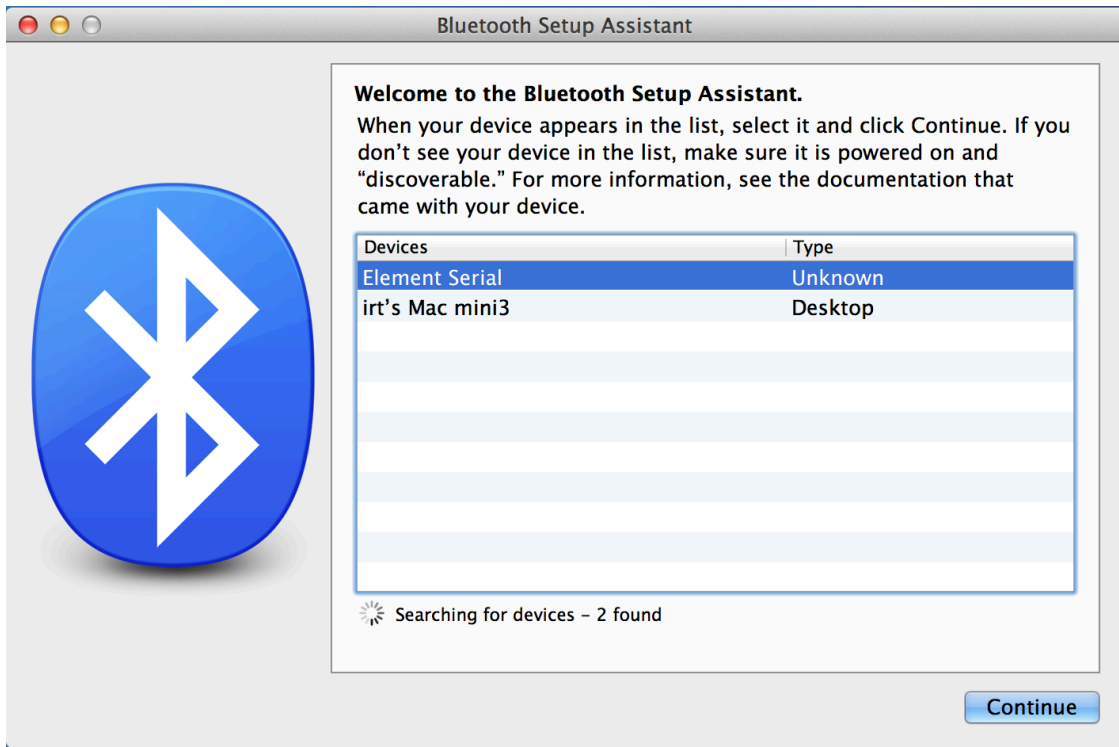
1. Connect the Element Serial BAM into the cargo bay connector and then power on the Roomba.



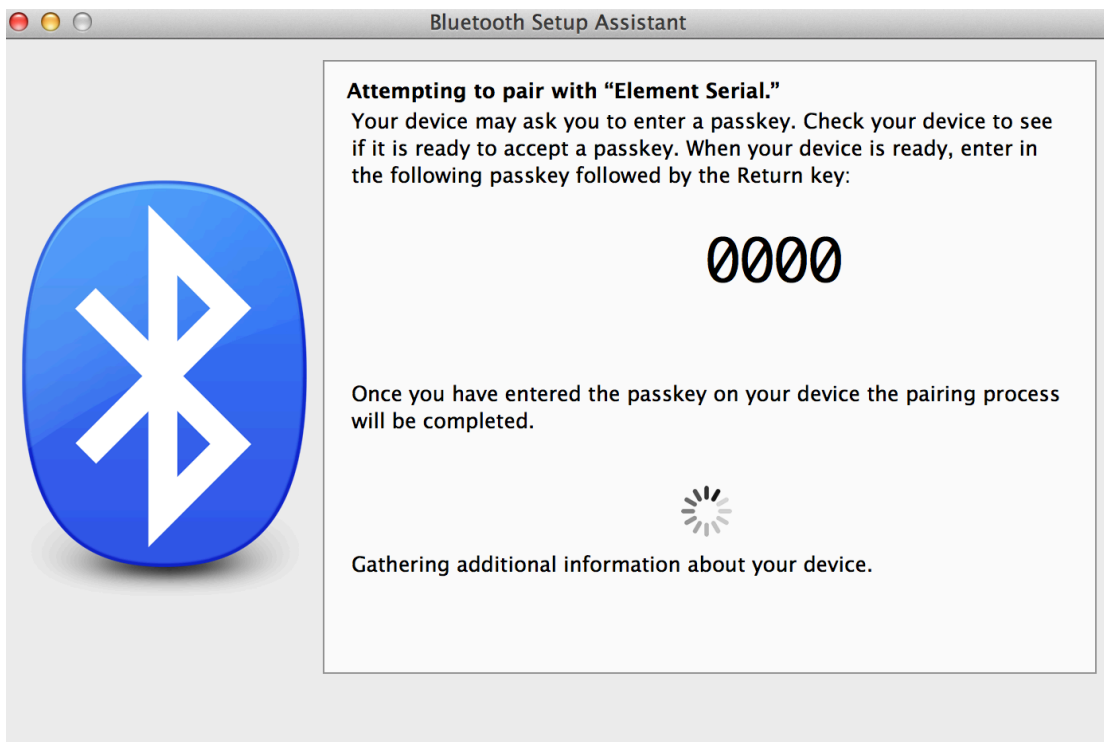
2. Click on **"Set Up Bluetooth Device"** under *the Bluetooth icon*.



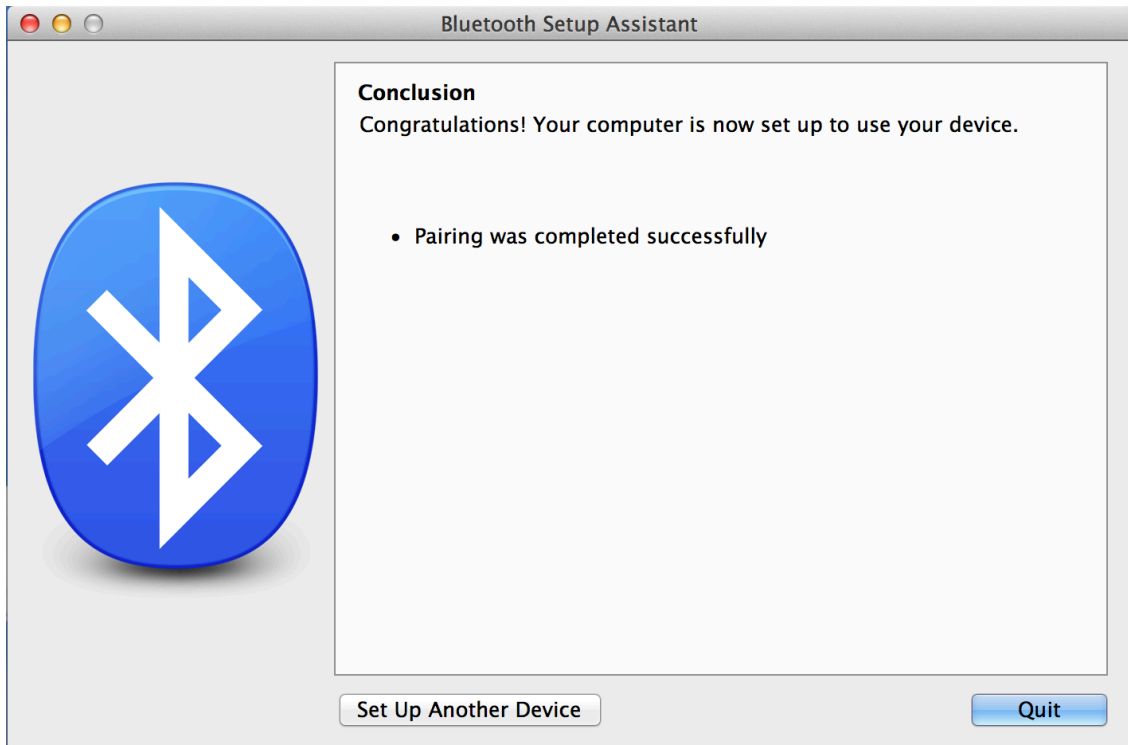
3. The system will begin to search for available Bluetooth devices. Click on the Bluetooth device, which goes by the name of **"Element Serial"**. Click on **"Continue"**.



4. The Element Serial Bluetooth device will automatically add **0000** as a passcode and pair the device.



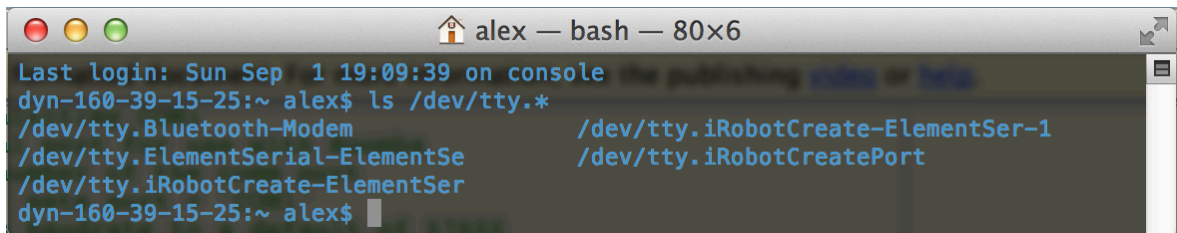
- The windows will then begin to install the drivers for the Element Serial Bluetooth adaptor. Click on **“OK”** when this process completes.



- Open terminal and type the following command:

```
ls /dev/tty.*
```

This command displays the serial ports connected to your machine and should by default show ***/dev/tty.ElementSerial-ElementSe***

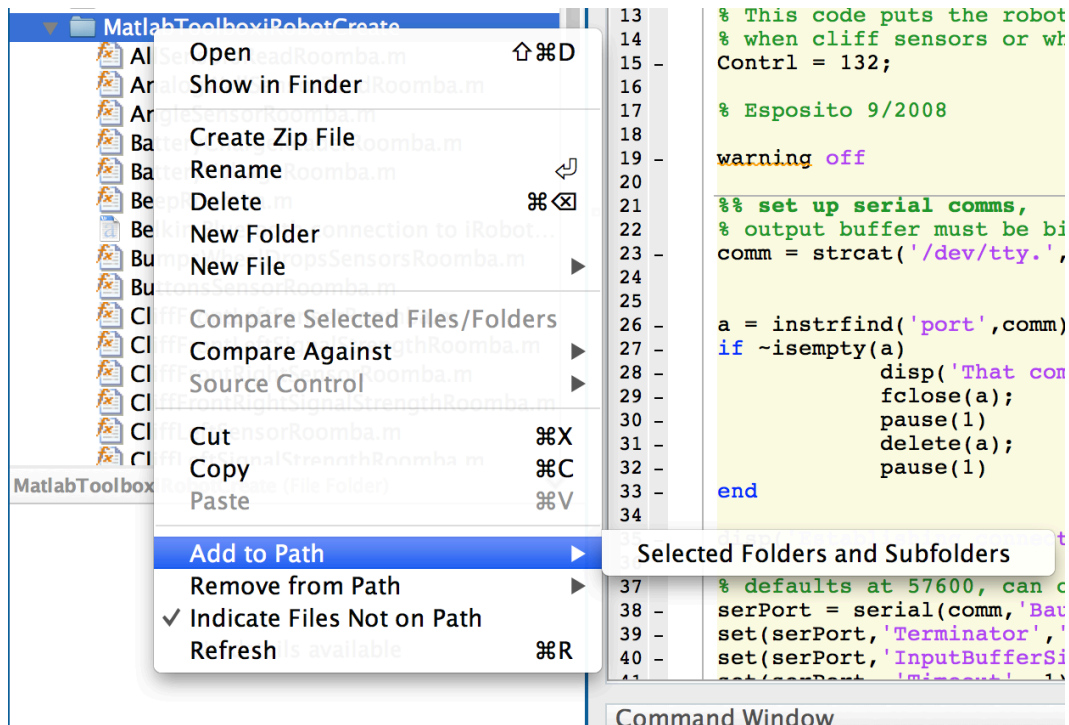
A screenshot of a terminal window titled "alex — bash — 80x6". The terminal shows the following text:

```
Last login: Sun Sep 1 19:09:39 on console  
dyn-160-39-15-25:~ alex$ ls /dev/tty.*  
/dev/tty.Bluetooth-Modem          /dev/tty.iRobotCreate-ElementSer-1  
/dev/tty.ElementSerial-ElementSe /dev/tty.iRobotCreatePort  
/dev/tty.iRobotCreate-ElementSer  
dyn-160-39-15-25:~ alex$
```

- Open the MATLAB and navigate to the **“MatlabToolboxiRobotCreate”** folder.



8. Right click on the folder and go to **Add to Path** → **Selected folders and subfolders**.



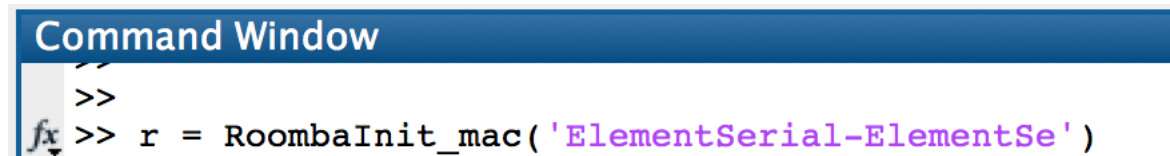
9. Then, in the command window, type

```
r = RoombaInit_mac(iRobot Create Serial Port Number);
```

For example, in Step 7, our iRobot Create Serial Port was *'ElementSerial-ElementSe'*. So, in our command window, we will write something like this:

```
r = RoombaInit_mac('ElementSerial-ElementSe');
```

Here, r is a variable called the *“serial port object”*. This variable has all the port numbers and the settings through which we communicate to the Roomba.



10. If the connection is successful, we should hear 2 beep sounds and the 2 LED lights on the Roomba should flash on.