

Using the Scribbler Robot in Introductory Computing: Dancing with the Robots

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The Scribbler Robot at a Glance:

- There are two parts to make up a Bluetooth wireless Scribbler robot: the base that comes from Parallax, Inc and the Fluke that was developed by IPRE (Institute for Personal Robots in Education)
- Elements of the base: built-in BASIC Stamp® , light sensors, infrared emitters, infrared detectors and line sensors, etc
- Elements of the fluke: wireless Bluetooth, infrared obstacle detectors, a color camera, and battery voltage sensor

The Scribbler and the Fluke



A Brief Look at the Myro Library

- Developed by the Institute for Personal Robots in Education, Myro is short for MY RObot. It is a new framework for programming robots. It is written in the language Python and designed for use in introductory computing courses.
- It is effectively used with the Scribbler and the Fluke

Description of and Justification for the Demonstration

- The dance routine will involve two robots.
- This demonstration will open up a new level of using the Scribbler robot because its users can control more than one robot at the same time.

Algorithm

- Using the remote robot control
 - robot = Scribbler("ComX") (with X is the com number)
 - robot.initializeRemoteControl(*password*)
 - robot.processRemoteControlLoop()
 - robot = RemoteRobot(*nameOfTheRobot*)
- Create different remote robot objects

Limitation of Remote Robot Control

- The Myro library seems to have problem with using the camera with remote robots. For example, it will issue error for commands such as *remoteBot.takePicture()*

Proposed Solutions

- Even though, the limitation of the Myro library with remote robots in taking pictures does not affect my application, I think that the openCV library might provide a solution for this limitation.

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