



alphaBot Workshop: constructing robots, translating language

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Wednesday, August 13, 2014

West Building, Exhibit Hall A

14:00-17:15 (2-5:15pm)

Description

In this workshop you will construct simple, robotic, drawing machines from a pre-fabricated kit of parts and program them to draw/write letters/characters/glyphs. No programming experience is needed, you just need to be interested in autonomous robotics, open-source Arduino programming, written language, and/or post-digital art/design practices. The intention of this workshop is not only to learn very basic open-source hardware and software skills, but more importantly, how to use these as tools to experiment with the phenomenological aspects of written language. You may take home the drawings/writing that you produce during the workshop, (in addition to the knowledge you gain!).

Format

Total enrollment will be divided in 5 groups. Each group will work with a robot, collaboratively. This will be a hands-on workshop experience requiring participation from everyone involved.

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SIGGRAPH 2014, August 10 – 14, 2014, Vancouver, British Columbia, Canada.

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ACM 978-1-4503-2977-4/14/08

Requirements

Only 1 laptop per group is required to program the robot, however I recommend everyone bring a laptop with the following:

- Available USB port
- Arduino IDE software installed, available at <http://www.arduino.cc/>
- FTDI Virtual Com Port (VCP) driver, available at: <http://www.ftdichip.com/FTDrivers.htm>. Installation Instructions are available as well.

Schedule

- 2 - 2:15: Introductions and Division of Groups
- 2:15 - 3:15: Construction of Robots
- 3:00 - 3:30: Introduction to Programming
- 3:30 - 5:00: Programming & Experimentation
- 5:00 - 5:15: Discussion and Clean Up

Materials

Other than a laptop, you are not required to bring any other materials. Robots are open-source and designed by the instructor, (and remain property of the instructor), consisting of the following basic parts:

- Custom Laser-cut Chassis
- DC Motors + Encoders
- Gear-reduced Wheels
- Batteries
- On/Off Switch
- Arduino-style "UNO" Micro-controller
- Arduino-style 2A motor driver
- Sharpie Markers
- Servo Motor Pen Lifter
- Misc. Wire, Nuts and Bolts

Photo/Video Documentation

By participating in this workshop you agree to allow me to use photographic and video documentation to promote this workshop and my other creative research, (never for commercial purposes). Please let me know if you wish to retain these rights.