Series 2. Braitenberg

Robotics, BSc Course, 2nd Sem., Prof. Béat Hirsbrunner, Simon Studer

Handout on Thursday, 5 March 2015 Due on Tuesday, 10 March 2015, 22:00

Reading
Study the lecture notes and [Bra 84], chap. 1-4 (pp 1-19), available at http://diuf.unifr.ch/pai/rob > Lectures.

1. Explorer and advanced lover
Implement the explore and advanced love behaviour as discussed in class. A playground and a .aesl template is available at http://diuf.unifr.ch/pai/rob > Exercises.

a) Explain the chosen weights for the proximity formula.
b) Explain the formulas you chose for the speed of the wheels.
c) Record a short low quality video per group

Remark. If in your experiments you found other interesting sets of weights or speed formulas, please explain them also.

2. Proximity Sensors Values
Measure the values p of a proximity sensor for various values of d, where d is the distance beween the sensor and an object. Choose d in the range of 1 to 10 cm. Try to guess a simple function satisfying p = f(d). Explain in detail your experiment setup.

Hand in. Upload your answer to diuf.unifr.ch/pai/rob > Upload by following the online recommendations.

Reference
[Bra 84] Valentino Braitenberg: "Vehicules: Eperiments in Synthetic Psychology", MIT Press, 1984