

School of Cognitive and Computing Sciences

First Year School Course — CG019

COGNITIVE MODELLING

Computer Class Week 5: Summer Term 2002

Benedict du Boulay and Steve Torrance

Modelling Sensors and Effectors

The purpose of this exercise is for you to examine in detail how a model can be built of the interactions between sensors and effectors and an environment. The experiment system has been built by Chris Thornton (COGS) based on the book by Braitenberg [Bra96]. In this the modelling is focused on very simple creatures/vehicles, not humans. Documentation for the program can be found at

<http://www.cogs.susx.ac.uk/users/christ/bugworks/website/index.html>.

Detailed descriptions of the experiments you can carry out can be found at

<http://www.cogs.susx.ac.uk/users/christ/bugworks/website/quickStart.html>

Getting Started and Finishing

At the Unix prompt type

```
source /usr/local/global/java2login < RETURN >
cd /local/share/html/teach/bugworks/sys < RETURN >
java BugWorks < RETURN > (note the capital "B" and "W")
```

This will bring up a Control Panel and a Tutor panel which explains what to do. If the Tutor panel does not appear, press the "Tutor" button. This describes both how to work the system and an experiment you can do.

The documentation explains how you can keep a record both of the vehicles you create and of the simulations within which they operate. To exit from the BugWorks system click the button in the top left corner of the Control Panel.

Activities

You should aim to complete at least the first "quickStart" mission. You can, of course, do more than this if you wish.

Make sure to logout from Unix before leaving the terminal by clicking the EXIT icon on the screen.

References

[Bra96] Valentino Braitenberg. *Vehicles: Experiments in Synthetic Psychology*. MIT Press, Cambridge, Massachusetts, 1996. QU 4588 Bra.