Module 2B
Introduction to NetLogo

The NetLogo Interface

Things to note about this interface:

**Tabs.** Across the top are three tabs:

- **Interface** is the main tab where you interact with your model.
- **Information** is a text window intended for background information about the model.
- **Procedures** is the tab where you can modify a model’s code or write your own.
**Buttons.** In this model there are two buttons, setup and go. You are likely to find setup and go buttons in every sample model. Setup initializes variables and creates agents (turtles) according to your initial conditions. Go starts the action in the model. Buttons are created and used in the Interface tab.

**Slider bars.**Slider bars are used as input devices to control variables that are initialized as part of setup. Slider bars are created and used in the Interface tab and automatically become global variables for your procedures.

**Switches.** Switches are used to control settings; typically whether or not a feature is turned on. They are created and used in the Interface tab.

**Add, Edit, Delete.** In order to add buttons, sliders, plots or other input/output devices to the interface, you need to select the tool from a dropdown box, and then hit the “add” button. When you select an existing item in the interface, you can Edit or Delete it.

**The World.** The large black box is the “world”. Some of its size and properties can be controlled by the Settings button. How it is occupied is controlled by the procedures you write.

**Settings.** The settings button allows you to set the size of the behavior space and also to control whether there are “edges” to the world or whether the world “wraps-around”. In the first case, when a turtle reaches the edge, it stops and depending on your program, may turn around. In the second case, a turtle moves off one edge of the world and reappears at the opposite edge. In some models, this can be disconcerting.

**Command Center.** The command center allows you to enter primitive (pre-defined) commands on the fly, without having defined them in procedures. You can enter commands from the Observer, Turtle, or Patch perspective. The “observer>” you see indicates that commands typed now will be executed as an observer. If you click on the “observer>” you will see the option to choose turtles or patches. You can toggle the command center using CTRL/ to make it appear and disappear.

First, let’s look at what NetLogo can do. Click on Setup and then Go. When you want to stop the model, click on Go again. Note that the Go button has a pair of arrows in the lower right corner. This symbolizes that this button will continue to repeat the procedure it is calling over and over until you click on the button again. The setup button does not have these arrows and is used as a “do it once” button. If you click on the Go button again (after having stopped the model), it will continue the model where you stopped it. To restart the model, you need to first click on Setup again. Now change some of the slider bars and run the model again. Play with these variables (slider bars) to get the hang of using NetLogo.

Reference: L. Bienvenue and H. Hirst “Modeling Change with NetLogo” (Shodor Educational...