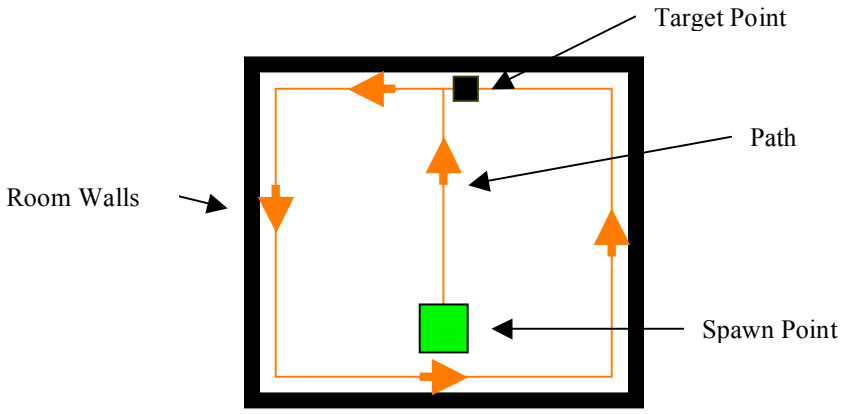
The Warm-Up Lap

Programming Assignment #1
CSC 481 – Spring '10

Problem Setting

This programming exercise is designed to get you and the quagents warmed up for more involved assignments.

Using the 'Empty Room' quagent world you are to write a program with the Java API that directs a quagent to walk once around the perimeter of the room. More specifically, once your quagent has spawned in the Empty Room walk straight to a wall. Upon reaching the wall, turn left. Walk until you reach the end of this wall then turn left again. Continue to walk along the perimeter of the room until you are back at the point where you first encountered the wall. Please note that the target point of your lap does not have to be exactly the point where you first encountered the wall because exact locations are difficult to reach with the quagents. However, it should be close to the point where you first encountered the wall. The following diagram illustrates a typical path.



Once you reach the target point simply abandon the quagent (that is, call the 'close' command), this will kill the quagent at the spot where it is standing.

You should pick a quagent (programming the quagent config file appropriately, **NOTE: do not** use the soldier) and implement your solution for this quagent. Please hand in your config file as part of your program source.

Remember that you can use the 'rays' command to see walls or you can simply 'bump' into walls by examining whether your quagent actually moved after a 'walk' command (if the quagent did not move the 'TELL STOPPING' event will return a value of 0).

Things you will be graded on

- Your quagent actually completes a lap *along* the wall – 70%
- Elegance of your solution (i.e. a well designed program), code structure, and commenting – 30%

Submitting your Project

Submit your program by zipping your Java source code and the compiled Java class files together and email the file to hamel@cs.uri.edu by **Wednesday February 3rd 10pm**.

Good Luck and have Fun!