Project 4
Project 4 Objectives

At the end of this project, you should be able to:

• design a Finite State Machine (FSM) that performs a specified high-level task,
• implement the FSM in code,
• connect FSM events to sensor events, and
• connect FSM actions to control actions.
Project 4 Field

Starting location: A or B (unknown)

Switch zero in some state

Andrew H. Fagg: Embedded Real-Time Systems: Project 3
Project 4: Stage 1

- If starting at A, then navigate to B
- Otherwise, navigate to A

Must infer which location you are starting at
Project 4: Stage 2

• If switch was in FALSE configuration, then navigate to C and stop
• Otherwise: navigate to D and stop

Must infer which location you are starting at
Part 1: Design the FSM

- What are the events?
  - E.g., reaching a wall

- Actions?
  - E.g., setting the heading_goal or braking

- States?

- Transitions?
Part 2: Implement the FSM

• Implement and test incrementally
Checkpoint

• 60 minute meeting within one week
• Have part 1 completed and part of part 2 completed and tested
• A successful checkpoint is worth 10% of the project grade