Autonomous Multiagent Systems

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Week 2

Administrative Stuff

- Questions about the syllabus?
- Problems with assignments?
- Class level
- Mailing list - announcements yesterday
- Discussion list?
- Final tournament date

New Assignments

- New (harder) programming assignment
- Readings:
  - Brooks' reactive robots
  - A more deliberative architecture
  - RoboCup synthetic agent challenge

Any Questions?

My Requirement of Agents

1. Sense

2. Decide (“think”)

3. Act

$\boxed{\text{Situated in an Environment}}$

Environments

$\boxed{\text{Environment} \Longrightarrow \text{sensations, actions}}$

- fully observable vs. partially observable (accessible)
- deterministic vs. non-deterministic
- episodic vs. non-episodic
- static vs. dynamic
- discrete vs. continuous
- single-agent vs. multiagent
- mobile?

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Some of your Examples

- alarm clock, cruise control
- traffic regulator, stock market agent
- math puzzle solver, theorem prover
- electron, neuron
- automatic sliding door, smoke detector, motion detector, automatic escalator, home security system, air bag system

My Requirement of Agents

1. Sense

2. Decide (“think”)

3. Act

Situated in an Environment

The Decision

- reactive vs. deliberative
- multiagent reasoning?
- learning?

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