

CS344M
Autonomous Multiagent Systems
Spring 2008

Prof: Peter Stone

Department of Computer Sciences
The University of Texas at Austin

Good Afternoon, Colleagues

Are there any questions?

Logistics

- Programming assignment questions?

Logistics

- Programming assignment questions?
- Check the resources page

Logistics

- Programming assignment questions?
- Check the resources page
- Next week's readings up
 - Multiagent Systems – an overview
 - Another overview (optional)
 - Pushing Brooks' approach to MAS

Logistics

- Programming assignment questions?
- Check the resources page
- Next week's readings up
 - Multiagent Systems – an overview
 - Another overview (optional)
 - Pushing Brooks' approach to MAS
 - Free-form response

Writing

- Direct, articulate responses
 - Thesis sentence
 - Supporting argument
 - Demonstrate that you know what you're saying

Writing

- Direct, articulate responses
 - Thesis sentence
 - Supporting argument
 - Demonstrate that you know what you're saying

One way that TCA departs from Rodney Brooks' design principles is that TCA employs a central control module. TCA's central component routes messages to the various connected modules and maintains control information. Brooks' designs, on the other hand, connected perception directly to actions, bypassing any form of central control and also any central representation of the world.

Reactive vs. deliberative (3 senses)

- Respond in a timely fashion
- No complex representation
- No state at all (respond to current percepts)

Reactive vs. deliberative (3 senses)

- Respond in a timely fashion
- No complex representation
- No state at all (respond to current percepts)

From the book:

- $action : \mathcal{P} \mapsto \mathcal{A}$
- Decision based entirely on the present

Reactive vs. deliberative (3 senses)

- Respond in a timely fashion
- No complex representation
- No state at all (respond to current percepts)

From the book:

- $action : \mathcal{P} \mapsto \mathcal{A}$
- Decision based entirely on the present
 - True of Brooks' “reactive” agents?

Class Discussion: Adam Setapen

“We hypothesize that much of even human level activity is similarly a reflection of the world through very simple mechanisms without detailed representations.”

- An activity!

Brooks' Goals

Brooks' Goals

- Autonomous mobile agents that are seen as intelligent
- No interest in applications
- Timely, robust, do something

Brooks' Goals

- Autonomous mobile agents that are seen as intelligent
- No interest in applications
- Timely, robust, do something
- How differ from 3T goals?

Brooks' Goals

- Autonomous mobile agents that are seen as intelligent
- No interest in applications
- Timely, robust, do something
- How differ from 3T goals?
 - What are their stances towards modeling biology?
 - Which is more biologically plausible?

Brooks' Goals

- Autonomous mobile agents that are seen as intelligent
- No interest in applications
- Timely, robust, do something
- How differ from 3T goals?
 - What are their stances towards modeling biology?
 - Which is more biologically plausible?

Subsumption Architecture

Brooks' Goals

- Autonomous mobile agents that are seen as intelligent
- No interest in applications
- Timely, robust, do something
- How differ from 3T goals?
 - What are their stances towards modeling biology?
 - Which is more biologically plausible?

Subsumption Architecture