CS344M
Autonomous Multiagent Systems
Spring 2008

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Good Afternoon, Colleagues

Are there any questions?

Logistics

- Programming assignment 4 — any questions?

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  - No exam
  - Final tournament and oral project presentation

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- **Multiagent Systems :** Behavior coordination or behavior management.
  - No necessary guarantees about other agents.
  - Individual behaviors typically simple relative to interaction issues.

Multiagent Systems

- Study, behavior, construction of **possibly preexisting** autonomous agents that interact with each other.
  - incomplete information for agents
  - no global control
  - decentralized data
  - asynchronous computation

Why Multiagent Systems?

(7)

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- Some domains require it. (Hospital scheduling)
- Interoperation of legacy systems
- Parallelism.
- Robustness.
- Scalability
- Simpler programming.
- "Intelligence is deeply and inevitably coupled with interaction." – *Gerhard Weiss*

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- **Scientific community:** full solutions (perhaps with varying information) combined

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- Engineering

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- communication
- trust
- recursive modeling
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Convoy example

Individual Agents

What did Sycara say about reactive vs. deliberative agents?

Individual Agents

- Purely reactive agents have disadvantages
  - Can't react to nonlocal info or predict effects on global behavior
  - hard to engineer
- Hybrid approach better
- Hard to evaluate agent architecture against one another