CS378
Autonomous Multiagent Systems
Spring 2005

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Week 13a: Tuesday, April 18th

Good Afternoon, Colleagues

Are there any questions?

Logistics

- Final tournament: Tuesday, May 16th, 1pm

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- Final projects due in 2 weeks!

Reading Overview — Vidal and Durfee

Recursive Modeling Method

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- etc.

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- Use deeper models
  - Includes physical *and* mental states
  - Could be computationally expensive

Types of models

Example: pursuit task

No-information: Random choice

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No-information: Random choice

Sub-intentional: Not rational

Intentional: Others use same model

Lessons

- Modeling can help
- There is a lot of useless information in recursive models
- Approximations (limited rationality) can be useful

Tracking Dynamic Team Activity

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- Use your own plans to model others
- Use explicit team operators
  - Introduces challenges of role assignments, and
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- Assume agent is using a plan that you could use,
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- Act based on assumed actions of others

Where do Models Come From

Observation:

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What if we can't build a full model in advance?

- What are some incremental approaches for building a predictive model?

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- Rock beats scissors
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- Am I modeling you?
- Would your end strategy change if I can?

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		Action 1	Action 2
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Threats slides

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  - common payoff = search for pareto optimum
  - General sum is the interesting case:
  - Learning in an environment with other, unknown, independent agents who may also be learning
  - Need to do well against some set of agents, never too poorly, and well against yourself.