Autonomous Multiagent Systems

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Week 5, Thursday (9/26)

Any Questions?

Programming assignment 3

- Any reactions?
- How did you do it?
  - Where were your players?
  - What did they communicate?
  - Did you use relative or global coordinates?

Midterm survey

- It will help Vinay and me
- It will help next year's students
- It will help you!
- You can do it anonymously
- I'll keep bugging you until I have at least as many responses as there are students.

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Overview of the Readings

- Textbook chapter 8
- Desiderata for ACLs (optional)
- ACLs – The Current Landscape

Desiderata

Form: simple, readable, concise, easy to parse and generate, extensible

Content: well-defined primitives, flexible content

Semantics: unambiguous, address location and time

Implementation: efficient, networking issues hidden, amenable to partial implementation

Networking: usable on top of existing protocols

Environment: interoperability with other languages

Reliability: reliable, secure, authentication possible, error handling

ACLs – Current Landscape

"Languages exist to serve a purpose, namely the communication between willing—and occasionally unwilling—participants"

- There are different options
- Subtle differences
- Why a standard?
  - What are the pros and cons?
- How are they created?

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Week 5 Exercises

- Would KQML, FIPA ACL, or KIF have helped?

  No: 9

  Yes: 4

  just KIF: 2

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CYC – Doug Lenat

- Attempt to program common sense

- $>$ 1 million rules
  - "Trees are usually outdoors."
  - "Once people die they stop buying things."
  - "Glasses of liquid should be carried rightside-up."

- Ongoing effort since 1984

- Potential applications?
  - Some listed on their web site
  - Question answering, retrieval of captioned information, machine translation, speech recognition, semantic data mining, . . .

Programming Assignment 4

- Create a full team!
- Main point: get familiar with the code base (or build up your own)
- Start thinking about your project proposal.

Next Week's Readings – Teamwork

- Joint intentions – formal model
- STEAM – general teamwork construction (optional)