Proactive Assistant Agents

Organizers:
Felipe Meneguzzi and Jean Oh
Carnegie Mellon University
Proactive Assistant Agents

Organizers:
Felipe Meneguzzi and Jean Oh

PAA says: You have forgotten to include your name. I will do that for you.
Proactive Assistant Agents

Organizers:
Felipe Meneguzzi and Jean Oh
Carnegie Mellon University

Presented by:
David V. Pynadath
University of Southern California
Problem Statement

- Decide whether user needs assistance
- Determine what assistance to give
- Give assistance in useful way
Problem Statement

- Decide whether user needs assistance

- Determine what assistance to give

- Give assistance in useful way
Problem Statement

- Decide whether user needs assistance
- Determine what assistance to give
- Give assistance in useful way
Problem Statement

- Decide whether user needs assistance
  UM
- Determine what assistance to give
  AI
- Give assistance in useful way
  HCI
Problem Statement

- Decide whether user needs assistance
- Determine what assistance to give
- Give assistance in useful way

PAA = UM + AI + HCI
Agent Tasks

- **Intelligent tutoring systems**
  - Folsom-Kovarik et al.

- **News reading**
  - Iacobelli et al.

- **Workflow management**
  - Gil et al.

- **Elder Care**
  - Han & Pereira, Lin & Makedon

- **Disaster Response, Threat Detection**
Challenges
Challenges

- Building models
Challenges

- Building models
- Interpreting models
Challenges

- Building models
- Interpreting models
- Making decisions under uncertainty
Challenges

- Building models
- Interpreting models
- Making decisions under uncertainty

**PAA says:** Your presentation is too long. I have deleted the remaining 17 challenges.
Solution Methods

- Exploit social media to build models
  - Facebook apps
  - Wikipedia

- Semantic workflows

- Decision theory
  - Bayesian networks
  - (PO)MDPs
Outstanding Issues
Outstanding Issues

- How do we deal with naive users?
Outstanding Issues

- How do we deal with naive users?
- How do we quantify savings to user?
Outstanding Issues

- How do we deal with naive users?

- How do we quantify savings to user?

**PAA says:** Your slides are too boring. I have inserted a picture of a sock monkey.
Thank You

- http://www.cs.cmu.edu/paa-2010/