

Multi-Agent Programming Contest 2012

Participation Registration

Abstract. Please follow the given template structure for your submission by answering the questions as concisely as possible, not exceeding the total of 4 pages. It is vital to explain in this submission how are you using a multiagent approach.

Introduction

The LTI-USP, located at the University of São Paulo, is the oldest and one of the most relevant research groups in multi-agent systems in Brazil. The group participated in the 2010 edition of the Multi-Agent Programming Contest and the cows-and-cowboys scenario was used during the last two years in the Multi-Agent course held by Jaime Simão Sichman and Anarosa Alves Franco Brandão at the Department of Computer Engineering and Digital Systems of the University of São Paulo.

For this year's tournament, the LTI-USP team is working since the beginning of May, having invested (approximately) 200 hours. The LTI-USP team is formed by:

- Team members:
 - Mariana Ramos Franco ¹ - MSc. Student at University of São Paulo
 - Luciano Rosset - Undergraduate Student at University of São Paulo
- Supervisor:
 - Jaime Simão Sichman - Associated Professor at University of São Paulo

System Analysis and Design

1. Briefly, what is the main strategy of the team?
2. Will you use any existing multi-agent system methodology such as Prometheus, O-MaSE, or Tropos?
3. Do you plan to distribute your agents on several machines?
4. Is your solution based on the centralisation of coordination/information on a specific agent? Conversely if you plan a decentralised solution, which strategy do you plan to use?
5. Describe the communication strategy in the agent team. Can you estimate the communication complexity in your approach?
6. Describe the team coordination strategy (if any)
7. How are the following agent features implemented: *autonomy*, *proactiveness*, *reactiveness*?

¹ team's main-contact

Software Architecture

1. Which programming language do you plan to use to implement the multi-agent system? (e.g. 2APL, Jason, Jadex, JIAC, Java, ...)
2. Which development platform and tools are you planning to use?
3. Which runtime platform and tools are you planning to use? (e.g. Jade, AgentScape, simply Java,)
4. Which algorithms will be used?

Please explain the reasons for your answers.