

Multi-Agent Programming Contest 2020

TRG Participation Registration

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Abstract

Please follow the given template structure for your submission. It is vital to explain in this submission how you are using a multi-agent approach (or why not).

You need to submit the first section (General) of the document as PDF to the mailing list and the complete document to one of the organizers. (Of course you are free to submit the complete document to the mailing list as well).

due **10 August 2020**

General

1. What is the name of your team?

The Requirement Gatherers (TRG)

2. Which (agent) platform/programming language(s)/frameworks are you using and why?

Jason, as it is a reliable framework for agent development and is a framework that we are comfortable with!

3. Any tips you want to give the other participants? :)

I don't have any tips to give, as I myself am still a bit inexperienced with agent development. However, I do wish the other participants best of luck!

Specifics

Organization

1. Who is the main-contact? Please also provide an email address.

Michael Vezina: michaeljvezina@cmail.carleton.ca

2. The contest is planned for October/November. If possible, please indicate any preferences/constraints you might have regarding the dates.

I am not available the week of Oct 20-26.

System Analysis and Design

1. What is the **main strategy** of the agent team?

The main strategy is to get the agents to first authenticate and be able to identify one another so that they may properly communicate and translate relative locations between each other. There is a central agent, known as the operator, that does not participate in the competition but rather parses all tasks currently available and assigns tasks and requirements to each agent. Agents then coordinate with all team mates that are responsible for the same task (based on how the operator assigns tasks).

2. Do you use any existing MAS **methodology**, e.g. Prometheus, O-MaSE, Tropos, ...?

None.

3. Do you plan to **distribute** your agents on several machines?

No. All Agents will reside on the same machine.

Agent Development

1. Which **development** platform and tools (e.g. IDEs) are you using?

Using IntelliJ IDEA as an IDE for developing and debugging Java and AgentSpeak (Jason).

2. If you used agent technology, did you have previous experience?

Previous experience with Jason comes from MAPC 2019.

3. Do you think your choice of tools/platforms/... already paid off?

Yes, the IntelliJ IDE and Jason as an agent framework has been an excellent choice for agent development.

Evaluation

1. What are strengths of your (agent) team?

Ability to share knowledge of the map allowing for better navigation.

2. What are the (known) weaknesses of your (agent) team?

Considering there was only one developer for this agent team, there will definitely be a few edge cases that the agents won't be able to handle. In terms of behaviour, this agent team has been programmed to only complete tasks and work together. The team will not be competitive

or intentionally disrupt the other team. Most of the development time was spent just getting the agents to be feature-complete to qualify. One major weakness as a result of all of this is that the agents might get stuck repeating the same action indefinitely if it runs into an edge case that it hasn't been programmed to handle.

3. How far do you think you are with your agents? What are you planning to add/change until the contest?

We will be using the same agents as last year's contest and will adapt them to this year's scenario. Most of our development time will consist of adapting to the new contest scenario and changing our strategy to take into consideration our concerns from last year's strategy as stated in our MAPC 2019 paper.