References


[58] OOWL, http://www.w3.org/TR/owl-features/.


This appendix completes the formal specification of an agent component. The definition of each class of the attributes of an agent component is included in the ontology that models agents, how is depicted in Figure 23 and Figure 23. We represent only the mandatory feature, as a constant to represent a Variability_Type, to help with the visualization of the figure, but the other features (or, alternative and options) are represented analogously to the mandatory one.

Figure 22. Definition of Classes (i).
Figure 23: Definition of Classes (ii).

Figure 24 shows some individuals we make reference for representing the attributes of the Book Buyer Agent, like behaviors, programming language, tags and platform.

Figure 24: Individuals of the Attributes of an Agent.
Aiming to achieve one of the steps of this thesis, we conducted a survey that related software agents treated as software components. The main idea was to populate the repository of agents as software components and to initialize the taxonomies and individuals of the ontology, according to the survey’ results. The questionnaire that is part of the survey consisting of:

1. Briefly describe the agent.
Example: The agent searches every two days among several airline companies for the cheapest flight from a particular city to other preselected destinations made by the user. It then sends an email or text message to the user with the suggested flight.

2. Name of the agent.
Ex: FlightPromotionAgent

3. From what software context is the agent?
Ex. Buy and Sell Tickets, Aeronautics, Travel

4. What is the role of the agent in the system?
Ex: Search for cheap flights B. Send a message or email to the user

5. What programming language was used to implement the agent?
Ex: Java

6- What platform was the multi-agent developed with?
Ex: Jason

7- Which are the behaviors of the agent?
Ex: Autonomy, Mobile

8- What tags are associated with the agent?
Ex: Flight searcher, flight promotion searcher

9- What version is the agent?
Ex: 2.9

10- When was the agent created?
Ex: August 3, 2011

11- What are the attributes of the agent’s interface?
Ex:
Receiver Message Interface
Type of message = “Inform”
Context of the message = “negotiation”
Content of the message = “new price of the flight it is looking for”
Agent participant = SellerFlightAgent

12- Upload each agent in one of the following formats: .jar, .war, .rar, .zip and send the file to the researcher’s email.

If you are able to contribute more than one agent you have developed, please fill out a form for each agent sent with the corresponding documentation.