Research Matchmaking
A SENG 696 Sample Project

Group Number: 02

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(1)   Introduction:

The design of an agent based 'Research Matchmaking' for professional Researchers to meet and share valuable materials with each other for their research. There is a time when one needs a particular material but could not find in one's university so it would become difficult to follow the research and complete in particular time. Moreover, some research needs other researcher's data to analyse and use it for further development. This platform provides facility for experimenter to find the required facilities online via others.

(2)   System Description:

This system has three types of users namely provider, client and guest. One needs to register to find or provide the services one is looking for. Client can search for provider using different kinds of filters. On the other hand, Provider needs to choose between two types of account either premium or basic. Once the client is able to find suitable provider, client can communicate via chat and make a deal with the provider. Both parties have power to accept or reject the offers. After accepting the common terms both need to sign an online contract and afterwards both parties can communicate over the secure chat and can see the progress of the project.

Moreover, there are several things each member is able to do. Like any change request by client after accepting the contract can be accepted or rejected by the provider. Besides, there are several things that are decided by the agent, for instance hourly compensation is not affected by the ratings from the past clients, every payment would go through the payment agent and system will receive 30% of the total payments.

The system will allow the contract negotiation process to be completed quickly and easily, with little need for user input (form either team owners or players) beyond the initial configuration of the software clients according to personal preferences.

(3)   System Design Documents:

In the following section we will use the GAIA methodology to better represent our system. Within the GAIA methodology there are two main stages that we must concern ourselves with: The Analysis and Design stages.

(3.1) Role Model: we can see that we have several roles

Registration
Authentication
Project Change Handler
Provider Search
Project Creation
Plan Checker
Bid handler
Message Handler
Contract Handler
Payment Handler
Project Tracker
Feedback handler
GUI

(3.2) Agent Model:

Access Agent
Project Agent
Plan Agent

Message Agent
Payment Agent
Feedback Agent
Search Agent
GUI Agent
Controller Agent

(3.3) Interaction Model:

Registration Request
Authentication Request
Project Creation
Search Providers
Bid Creation
Plans listing
Plan Payment
Respond to bid
Request Contract
Create system message
Get messages
Create user message
Project Progress
Project Payment
Submit Feedbacks
Fetch Feedbacks

(3.4) Services Model:

Access
Search
Payment
Plan
Message
Project
Feedback
Controller

(4) Future work:

- Video call between two parties

- Online collaboration platform

(4)   Reference:

- o Books:

- o M. Wooldridge, N.R. Jennings, D. Kinny: The Gaia Methodology for Agent-Oriented Analysis and Design, Autonomous Agents and Multi-Agent Systems, 3, 285-312, 2000.

- o Wooldridge, M.; Jennings, N. R.; Kinny D. (2000). The Gaia Methodology for Agent-Oriented Analysis and Design. Autonomous Agents and Multi-Agent Systems, 3, 285-312, 2000.

- o Paolo Giorgini and Brian Henderson-Sellers have written an excellent Introduction to Agent-Oriented Methodologies.