Multi Agent Communication Support for the Organic Building Concept of the Faculty of Information Technology

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Abstract – With the competitive, dynamic and fast moving ideas come up in the modern world, systems, processes and workflows which use classical human intervention in all aspects of work, would not perform the level required by the environment. This results the output produced as well as the time consumed, be outdated and failing to compete with the said dynamism.

Main expectation behind this paper is to describe the "Organic Building Concept" which is a summation of four components of which, one is the AgentClique. The AgentClique is introduced here as the communicator between other three. Each faculty member is represented with an agent who copies the actual profile of a member and monitors and updates the daily activities with the use of his/her AgentClique. The intention is to make this solution as close as possible to the natural flow of work and enhance the user experience of the daily encounters.

JADE is used as the agent development platform and Protégé as the Ontology developing tool. Both these add up to create and manage agents in a dynamic manner where efficiency of the system and the quality of the agent behaviour is currently controlled under a rule based approach. A Silverlight based user interface (UI) is provided for the ease of users and monitor overall performance of the agents. Further this paper illustrates on how agent communication happens using Knowledge Query Manipulation Language (KQML) under the FIPA specifications.

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