A Study of Multi-Agent Information System Based on Ontology-A Case for Weather Querying

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ABSTRACT

For most people, it is a common way to obtain information at Internet through some user interface. Take weather querying services for example, there are numerous of providers provide weather querying services, but they may present the same presentation style and the same result at all. This research provides a skeleton in order to let organizations swift provide special characteristic information presentation about them. This research uses JADE, a multi-agent platform, to build a WIGA (Weather Information Gathering Architecture) skeleton to process generality tasks, and use ontology which can be used by user to query a weather report. WIGA uses XML based institution definition document to specify the presentation. This research takes it tagging on multimedia presentation. JADE uses the weather ontology to share the basic weather knowledge for the agents in communication. Thus, there will be no communication difficulty among the agents. Users use JSP web pages to connect to server agents then send a request to WIGA. Agents under the architecture will inform the result to the users. As to result, it will automatically transform into SMIL format. WIGA architecture is about weather querying information presentation in the multimedia style on the JADE platform. It uses the weather ontology, rules of multimedia presentation about weather information and some weather multimedia files. Users can use three different ways to query weather information and show differently integrated result, there are types, date and area.

Keywords : XML, Weather Querying, JADE, Ontology, SMIL

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