The Implementation of the Multi-Agent Classification System (MACS) in Compliance with FIPA Specifications

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Abstract : The paper discusses the implementation of the MultiAgent classification System (MACS) and utilizing it to provide an automated and accurate classification of end users developing applications in the spreadsheet domain. However, different technologies have been brought together to build MACS. The strength of the system is the integration of the agent technology with the FIPA specifications together with other technologies, which are the .NET widows service based agents, the Windows Communication Foundation (WCF) services, the Service Oriented Architecture (SOA), and Oracle Data Mining (ODM). Microsoft's .NET windows service based agents were utilized to develop the monitoring agents of MACS, the .NET WCF services together with SOA approach allowed the distribution and communication between agents over the WWW. The Monitoring Agents (MAs) were configured to execute automatically to monitor excel spreadsheets development activities by content. Data gathered by the Monitoring Agents from various resources over a period of time was collected and filtered by a Database Updater Agent (DUA) residing in the .NET client application of the system. This agent then transfers and stores the data in Oracle server database via Oracle stored procedures for further processing that leads to the classification of the end user developers.

Keywords : MACS, implementation, multi-agent, SOA, autonomous, WCF

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