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{bibtex}pxc3976165.bib{/bibtex}   **Abstract**

In this paper, we propose to develop service model architecture by merging multi-agentsystems and semantic web technology. The proposed architecture works in two stages namely, Query Identification and Solution Development. A person referred to as customer will submit the problem details or requirements which will be referred to as a query. Anyone who can provide a service will need to register with the registrar module of the architecture. Services can be anything ranging from expert consultancy in the field of agriculture to academic research, from selling products to manufacturing goods, from medical help to legal issues or even providing logistics. Query submitted by customer is first parsed and then iteratively understood with the help of domain experts and the customer to get a precise set of properties. Query thus identified will be solved again with the help of intelligent agent systems which will search the semantic web for all those who can find or provide a solution. A workable solution workflow is created and then depending on the requirements, using the techniques of negotiation or auctioning, solution is implemented to complete the service for customer. This part is termed as solution development. In this service oriented architecture, we first try to analyze the complex set of user requirements then try to provide best possible solution in an optimized way by combining better information searches through semantic web and better workflow provisioning using multi agent systems.

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Index Terms

Computer Science   Artificial Intelligence

Keywords

Semantic Web   Multi-Agent System
Service Oriented Architecture