A Study of Agent Society Bases Proactive Recommendation System for Knoeledage Services

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ABSTRACT

As information becomes abundant and lacks of proper evaluation and management mechanism, the reuse of domain knowledge does not increase as we expected. With the development of software agents and ontology technology, users are able to obtain proper services and promote competitive advantages through the platform. The recommendation architecture of proactive knowledge services contains user interface, repository and core kernel modules. A user interacts with the system through user interface. A repository is a set of resources that can be retrieved via Internet and the service description contains service types, contents, preferences. The core kernel is composed of six agents such as the consultant agent that predicates requester needs, the operator agent that helps users retrieve services, the search agent that filters services from repositories, the evaluation agent that calculates membership of a service and the guard agent that checks your permission to access resources. The contributions of this paper are (1) apply ontology-based search mechanism: users can obtain services precisely at a lower cost; (2) using PASSI methodology: the agent-based system can be implemented completely; (3) integration of several tools and standards: the system integrates and applies various tools and standards to implement this system. Finally, the system not only promotes the sharing of knowledge but also enforces the code reuse and reduces the cost of developing similar systems. As knowledge services will be more and more common in the future, this architecture that we propose has long vision and necessary to apply in the different domains.

Keywords : knowledge services 、 PASSI 、 Agent Society 、 recommendation system、 OWL-S

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