Abstract

Web Service Technology (WST) is a Service Oriented Architecture (SOA) implementation framework that has attracted much attention. With the help of WST, user finds the required service in the service directories. Current service directories, such as Universal Discovery Description & Integration (UDDI), store service descriptions without any processing and knowledge management. They act as simple stateless search machines and do not use previous matching information to enhance future search. This motivates the need to create the Empower Service Directories (ESD). These directories are augmented with knowledge about web services that is encoded by a Semantic Interlinked Graph (SIG) of WST entities. In the proposed system, the services and their operations are the core entities of SIG and are interlinked using some defined semantic relations. In addition an ontology language is used to formally express knowledge in service directories. Using the SPARQL web services are extracted from the ESD. The major advantage of using the empower service directories service is its supports for highly complex queries which can be processed less time.

**Index Terms**

Computer Science  
Information Sciences
Keywords
Web service  Service directory  Service publishing  Semantic relationship.