Abstract

UML based Semantic Mapping Creation Tool

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Knowledge models can be used to share domain knowledge between systems and users, and adding Semantics to data is seen as the solution provider to enable interoperability and integration of diverse software systems. Ontologies are the key factors to adding such semantics, but ontologies produced by different systems and different people show high heterogeneity which hinders interoperability. Semantic Mapping could provide a way by which varied ontologies could be used to exchange this semantic information. However manual mapping generation and development is difficult, tedious, error prone and requires knowledge of ontology languages and mapping techniques and so knowledge engineers often perform these tasks. However, domain experts with good domain knowledge are better suited for such tasks. But, most domain experts and system engineers find it too difficult or lack the knowledge of mapping tools and techniques required to perform semantic mappings. This dissertation presents a UML based tool to create semantic mapping. UML class diagrams which are commonly used by domain experts and system engineers for modeling domains and so the tool tries to provide an interface which represents mappings in a similar manner which is easy to understand and use by domain experts and also generates mappings that can be used by them.