REVERSE ENGINEERING ONTOLOGY TO CONCEPTUAL DATA MODELS
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ABSTRACT.
Ontologies facilitate the integration of heterogeneous data sources by resolving semantic heterogeneity between them. This research aims to study the possibility of generating a domain conceptual model from a given ontology with the vision to grow this generated conceptual data model into a global conceptual model integrating a number of existing data and information sources. Based on ontologically derived semantics of the BWW model, rules are identified that map elements of the ontology language (DAML+OIL) to domain conceptual model elements. This mapping is demonstrated using TAMBIS ontology. A significant corollary of this study is that it is possible to generate a domain conceptual model from a given ontology subject to validation that needs to be performed by the domain specialist before evolving this model into a global conceptual model.
Keywords: Ontology, Conceptual Data Model, Large-scale Information and Data Integration.