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WORKING PAPER

Understanding Business Domain Models: The Effect of Recognizing Resource-Event-Agent Conceptual Modeling Structures

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April 2009

2009/575

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Abstract

In this paper, we investigate the effect on understanding of using business domain models that are constructed using Resource-Event-Agent (REA) modeling patterns. First, we analyze REA modeling structures to identify the enabling factors and the mechanisms by means of which users recognize these structures in a conceptual model and in a description of an information retrieval and interpretation task. Based on this understanding, we then hypothesize positive effects on model understanding for situations where REA patterns can be recognized in both task and model. Next, we conduct an experiment to demonstrate a better understanding of models with REA patterns compared to informationally equivalent models without REA patterns. The results of this experiment indicate that REA patterns can be recognized with minimal prior patterns training and that the use of ontology-derived patterns leads to models that are easier to understand for novice model users.

(Conceptual Modeling; Modeling Patterns; Enterprise Ontology, Business Domain Model, Patterns Training, Pattern Recognition; Model Understanding)