mROSE: To Determine Tool Selection and to Understand Model-Driven Software Evolution

Abstract

Growing interest in the model driven approaches has largely increased the number of tools into the model driven development environment. Previous research has shown that the stakeholders often do not use or know all of the tools available in the model evolution environment that they regularly use. The common solution to this problem is to provide a means to search through passive help documents. However, this approach requires a stakeholder to be able to express their desires in a form understood by search engine. So, choosing the right tool for MoDSE tasks has become difficult because of the diverse nature of numerous tools available. To overcome this limitation, this paper aims to present a prototypical recommendation system, named mROSE, to provide timely and useful recommendations to stakeholders. Two empirical studies were conducted to investigate if mROSE helps or hinders the stakeholders in MoDSE, if so under what conditions. First one was longitudinal user study and the second one was a laboratory user study. Performance of mROSE was also evaluated by using some of the existing metrics. These studies confirmed that mROSE can help stakeholders to choose right tools more efficiently and users liked the idea of having a recommendation system for MoDSE environment, like mROSE. These studies also revealed future directions that would improve the functionality of mROSE.

References


Rational Product Support for MDA, Model Driven Architecture(MDA) Information Center, IBM.


Mikko Konito, 2005. Architectural manifesto:choosing MDA tools, Three categories for evaluation, Model Driven Architecture(MDA) Information Center, IBM.

Peter Wittmann. Comparison of MDA tools. www. wittmannclan. com


Mulund Deshpande and Geroge karypis. Item-Based Top-N Recommendation
- Marcel Bruch, Thorsten Schafer, and mira Mezini. On Evaluating Recommender Systems for API sages. RSSE ’08, November 10, Atlanta, Georgia, USA pp16-29.

**Index Terms**

Computer Science 
Software Engineering

**Keywords**

Model Driven Approach Model-driven Software Evolution Mda Tools Uml Tools And Recommendation Systems For Software Engineering