Harmless MDE Adoption: A Case Study for Developing Business Applications

(Invited paper)

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Abstract— **MDE (Model Driven Engineering) was created as a response to the increased demands for the rapid development of complex software applications. MDE treats a model at a high level of abstraction as a central part of the implementation. With the support of domain specific languages (DSL) which are optimized for efficient modeling in a particular domain and different tools that implement the transformations from model to code, MDE is trying to make a breakthrough in the development of software that higher programming languages have made earlier with respect to assembly language. There are a number of studies from academic and industrial environments which show that the use of MDE techniques contributes to accelerating the development of software in an order of magnitude. However, MDE techniques are still not widely used. According to some studies, less than 5% of software teams are developing software in this way. There are a number of examples of unsuccessful introduction of MDE techniques. Some reasons are: the excessive complexity of the MDE tools and standards, the high cost of tools, the lack of a methodology for application of MDE in practice, the lack of sufficiently sophisticated modelers etc. The aim of this lecture is to show how MDE principles and techniques can be gradually introduced to a software team, with minimum risks, using an example of the development of business applications. Topics that are covered are: how to make business application suitable for MDE development, what to do with the parts of the applications that are too complicated for automatic generation, how to gradually reach the appropriate tools, and how to align existing processes with the principles of MDE.**