

A Model Based Approach to Software Measurement and Refactoring

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Abstract. MDE (Model Driven Engineering) is an approach to developing software where model representations and transformations take centre stage over the previously dominant source code. Frameworks such as EMF¹ (Eclipse Modeling Framework) have been developed that allow engineers to create models in a core representation (ECore in the case of EMF) and to define transformations on these using declarative and imperative languages such as ATL² (Atlas Transformation Language), QVTo³ (Query / View / Transformation operational), or, QVTd⁴ (Query / View / Transformation declarative).

In the presentation, we will discuss why we are using ATL to define transformations for calculating software metrics and performing software refactorings. We will also explain why, on top of this, we are building a DSL⁵ (Domain Specific Language) that can be used to script refactorings as well as the potential that this approach unlocks.

¹ <http://www.eclipse.org/modeling/emf/>

² <http://www.eclipse.org/at1/>

³ <http://wiki.eclipse.org/QVTo>

⁴ <http://wiki.eclipse.org/QVTd>

⁵ <http://www.dslbook.org/>