

Architecture-Driven Modernization Standards Roadmap

The Object Management Group (OMG) Architecture-Driven Modernization (ADM) Task Force is developing a set of modernization standards. Current work involves building a Knowledge Discovery Meta-model (KDM) to facilitate the exchange of existing systems meta-data for various modernization tools. Subsequent standards will address analysis, visualization, refactoring and transformation related standards. The following ADM standards descriptions provide an ADM Task Force Standards Road Map.

#1: ADM: Knowledge Discovery Meta-Model (KDM)

The KDM establishes an initial meta-model that allows modernization tools to exchange application meta-data across applications, languages, platforms and environments. This initial meta-model provides a comprehensive view of application structure and data, but does not represent software below the procedure level. The KDM establishes the foundation for subsequent ADM standards. The KDM was adopted in 2006.

#2: ADM: Abstract Syntax Tree Meta-Model (ASTM)

This ASTM builds upon the KDM in order to represent software below the procedural level. This effort will allow the KDM to fully represent applications and facilitate the exchange of granular meta-data across multiple languages. ASTM passed the architecture board is being rolled out in 2009.

#3: ADM: Pattern Recognition

The Pattern Recognition standard facilitates the examination of structural meta-data with the intent of deriving patterns and anti-patterns about existing systems. These patterns and anti-patterns can be used to determine refactoring and transformation requirements and opportunities that could be applied to one or more systems for the benefit of the enterprise. The will be issued in 2009.

#4: ADM: Structured Metrics Package (SMM)

The focus of the Software Metrics Package is to derive metrics from the KDM that can describe various system attributes. These metrics convey technical, functional and architectural issues for the data and the procedural aspects of the applications of interest. These metrics support planning and estimating, ROI analysis and the ability of analysts to maintain application and data quality. The task force envisions gaining validation for the metrics package by working with industry and academic resources. SMM passed the architecture board is being rolled out in 2009.

#5: ADM: Visualization

ADM Visualization focuses on ways to depict application meta-data stored within the KDM. This may include any variety of views as may be appropriate or useful for planning and managing modernization initiatives. Examples include the use of graphs or charts, metric summaries or standardized development models. There is no target date for this work.

#6: ADM: Refactoring

ADM Refactoring defines ways in which the KDM can be used to refactor applications. This includes structuring, rationalizing, modularizing and in other ways improving existing applications without redesigning those systems or otherwise deriving model-driven views of those systems. There is no target date for this work.

#7: ADM: Transformation

ADM Transformation defines mappings between the KDM and ASTM and target models. This standard defines the mappings and transformations that may occur between existing applications and top down, target models. Development paradigms may vary, but will include MDA as a target. This standard will complete ADM task force efforts in providing a transformational bridge between existing systems and target architectures. There is no target date for this work.