UML2 and Model-Driven Development

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Specifications by OMG summarize principles of data storing and modeling in a four level architecture. The first level is the meta-meta model that defines UML at metamodel level. The second level is the metamodel that describes the UML syntax. In the third level there are the models created by the users, and in the fourth level there are the object instances or records. UML has been widely accepted as an object oriented analysis and design method. An application-neutral interchange format allows UML models to be interoperable between development tools and developers. The XML is an appropriate format for transferring data via the Internet. The XML based XMI standard allow for different types of applications to interchange their data or models in a standardized way.

There is a new way of developing applications, the Model Driven Architecture. The MDA specification consists of a platform-independent UML based model (PIM), and one or more platform-specific models (PSM). With MDA, an application system is modeled once and only once. The MDA also will take advantage of XMI when it defines the mapping from PIM to XML.

An enhanced version of the language, which will be called UML 2.0 is in the process of being finalized by the OMG. UML 2.0 is likely to provide improved support for current technologies resulting in better productivity and quality.

It should deliver the following benefits:

Improved support for developing component-based software

- Better support for modeling architecture of software

- More options to build tools with simulation and code generation

- Superior support for executable models and dynamic behavior

- Improved diagram interchange between tools

- Enhanced scalability

In this paper I would like to summarize UML2 features supporting Model Driven Architecture and exchange of model information.