Model Driven Architecture with UML Essentials
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Pathfinder Solutions provides direct and complete solutions for organizations adopting the Model Driven Architecture (MDA) initiative of the OMG. The main goal of MDA - implementation independent models - has been the primary initiative of Pathfinder tools, training and consulting since the company's inception in 1995. Time-proven techniques for developing effective implementation independent models are taught in Pathfinder's *Waypoints* UML training, reinforced by experienced Pathfinder consultants, and fully supported by the *UML Essentials* add-in toolsets.

Pathfinder Solutions has collected a coherent and integrated set of industry-best-practice into the Model-Based Software Engineering (MBSE) process for applying UML modeling techniques to software development. MBSE promotes the MDA concepts of platform independent models (PIM) and mapping these models down to high-performance platform specific implementations. MBSE provides a complete and consistent definition of a PIM as a set of *domains*, with a well-defined scope and that includes behavioral specification with state charts and executable action semantics. The domain models are thus independent not only of middleware, but also of implementation language and execution environment architecture.

Pathfinder's *UML Essentials* MBSE toolset fully automates the mapping of PIMs into high performance implementations. This add-in toolset augments the capabilities of Rational's Rose and Artisan's Real-time Studio UML environments with the power and flexibility of *Springboard* template based translation.   *Springboard* enables the UML models that make up each domain in the PIM to be transformed into an implementation that meets the functional AND performance requirements of the specific project, and can adapt as the system architecture and implementation strategies change.   With full control over the templates controlling code generation, each end project has full control over their implementation architecture and project-specific optimizations.

Please refer to the following online resources for further information:

Overview Information
Achieving MDA through MBSE - www.pathfindersol.com/download/achieving_mda.pdf
MBSE Overview – www.pathfindersol.com/download/mbse_overview.pdf
Template-Based Translation - www.pathfindersol.com/download/translation_ov.pdf

Product Information
UML Essentials toolset – www.pathfindersol.com/umless.html
Waypoints MBSE/UML training – www.pathfindersol.com/waypoints.html
Pathfinder Solutions expert consulting – www.pathfindersol.com/mentoring.html

Related Papers
Please visit www.pathfindersol.com/papers.html for a selection of related white papers on UML and MBSE, including:
> "Durable Embedded System: Architecture via Domain Modeling"
> "Managing the Risks of Adopting the UML"
> "Topology Independence: Software Reuse Across Automotive Product Lines"