



Pathfinder Solutions Effective MDA Training

5-day class delivers pragmatic MDA approach for building complex, high performance systems

Developing and deploying high performance systems presents unprecedented complexity, implementation and productivity challenges. Successful organizations apply architecture-focused, model-driven development to give their practitioners a competitive edge, doubling development productivity* and reducing defects by over 90% **.

Bring your team up to speed on this proven and effective approach quickly and efficiently with Pathfinder Solutions *Effective MDA* training. Based on a decades of industry experience with model-driven software development, this 5 day course delivers a complete tool-independent methodology for building complex, embedded, real-time and other high performance systems.

Effective MDA Course Outline

This 5-day course is organized to sequentially build general UML and modeling skills while teaching each integrated phase of the methodology:

MDA Overview

- Key characteristics of MDA
- Costs and Benefits of MDA
- Platform-Independent Modeling with UML

Use Case Modeling

- Outline system capabilities with Use Cases
- Construct a Use Case Models
- Objectively evaluate Use Case Models

Systems Modeling Language (SysML)

- History of SysML
- Key elements of SysML
- SysML and UML

Logical Architecture and Domain Modeling

- Logical Architecture
- Component Interfaces
- Component Scenario Modeling
- Objectively evaluate Logical Architecture

Class Modeling

- Platform-Independent modeling
- Classes, Associations, Generalization
- Objectively evaluate Class Models

Behavioral Modeling

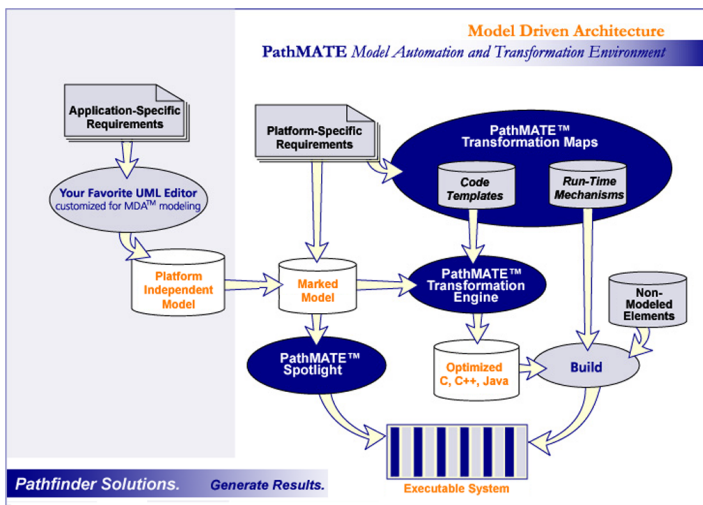
- State Independent Behavior
- State Dependent Behavior and State Machines
- Key Component-level Scenario Modeling
- Component-wide behavioral strategy
- Objectively evaluate Behavior Diagrams

Action Modeling

- UML-level actions
- Platform Independent Action Language
- Objectively evaluate actions

Deployment

- Test PIM components, system
- Transform PIMs to optimized implementation
- Testing opportunities via transformation



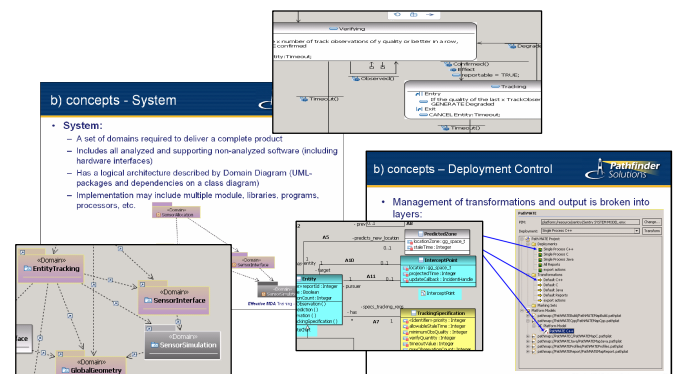
This MDA approach can be applied with a range of UML tools, and is specifically tailored for complex, high performance systems in distributed deployments.

“The Effective MDA class was just what we needed – a simple, end-to-end approach. They actually taught us how to build useful models.”

**Bruce L., Development Team Lead
Cytoc Corporation**

* Customer measured results on 12 month initial-adoption project, including training time and learning curves; subsequent gains are higher

** Customer measured results - number of defects reported from end of unit test through development integration phase





Pathfinder Solutions *Effective MDA* Training

Refined Curriculum based on Pragmatic Techniques

The *Effective MDA* class delivers a proven model-driven approach that is an accumulation of decades of industry best practice. Synthesizing a coherent methodology, Pathfinder Solutions has tailored each step to fit into an overall process for building complex systems. Giving you a simple, coherent, effective and proven approach, this course teaches your team what it needs to know to get your project done successfully and on schedule.

Builds Team-Wide Competence

Accommodating engineers with a range of experience and ability, the *Effective MDA* course has been specifically tuned to quickly bring your entire team up to a the level of competent practitioner with this MDA approach.

Extensive In-Class Exercises

Class material is reinforced and internalized with an extensive set of in-class exercises. The team-based whiteboard efforts build actual model elements in settings closely matching real-world contexts.

Integrated Example System Provided

In-class exercises build actual elements of a complex example system. A non-trivial system with a range of components, this system is sufficiently challenging to illuminate the utility of each modeling technique, but is still simple enough to grasp within the class context. Available in a range of UML environment as an executable MDA model, the example system is a valuable resource during the class, and afterwards as a rich reference.

On-Site Classes Available

Have *Effective MDA* Training onsite at your location to reduce travel costs and inconvenience.

Integrate Models with Hand-Written Code

Ranging from architectural techniques for interfacing with legacy code bases to simple integration of hand-written data structures, *Effective MDA* teaches proven methods for integrating with non-modeled components.

Tool-Independent Methodology

Based on OMG MDA standards and using the executable subset of the UML2 language, modeling techniques from *Effective MDA* are suitable for use with a range of modern UML editing environments. An optional tool-specific module is available for hands-on instruction in building MDA models on some of the more popular tools, including offerings from IBM Rational, Telelogic, and Topcased.

Maintain Momentum with Pathfinder Solutions Mentoring after the class

Effective MDA students and instructors build a rhythm and momentum. Continue building success with Pathfinder Solutions Mentoring. Our experienced mentors continue to teach and guide your team, directly participating in your team's architecture, development, integration and deployment efforts.

Industries & Application Domains

Effective MDA training has helped build competent modelers in a wide range of industries:

- Defense & Avionics
- Automotive
- Medical Instrumentation
- Manufacturing and Process Control
- Telecommunications
- Consumer Electronics
- Integrated Enterprise Management
- Personnel Systems

Give your team the competitive edge – contact us:

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