

MDD and MDA

Sorting out the model driven alphabet soup.

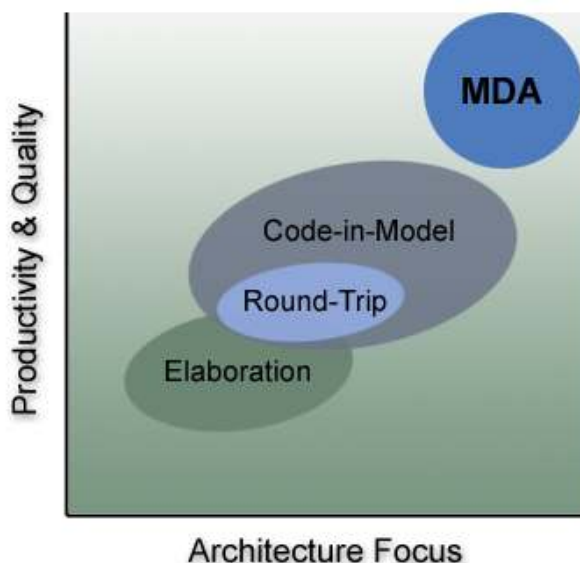
Model Driven What?

With all of the abbreviations out there, things can get confusing. So let's start with some basics. MDD is **Model Driven Development** – a range of software development approaches that are based on the use of software modeling as a primary form of expression. Sometimes models are constructed to a certain level of detail, and then code is written by hand in a separate step. Sometimes complete models are built including executable actions. Code can be generated from the models, ranging from system skeletons to complete, deployable products. With the introduction of the Unified Modeling Language (UML), MDD has become very popular today with a wide body of practitioners and supporting tools. More advanced types of MDD have expanded to permit industry standards which allow for consistent application and results. The continued evolution of MDD has added an increased focus on architecture and automation.



MDD technologies with a greater focus on architecture and corresponding automation yield higher levels of abstraction in software development. This abstraction promotes simpler models with a greater focus on problem space. Combined with executable semantics this elevates the total level of automation possible. The Object Management Group (OMG) has developed a set of standards called **Model Driven Architecture** (MDA), building a foundation for this advanced architecture-focused approach. By applying the wide reaching and integrated automation possible under MDA, software engineers using these technologies have found dramatic increases in both total productivity and quality in their software development projects.

Range of MDD Approaches



In addition to increased productivity and quality, MDA offers several other advantages over other less advanced MDD approaches, including:

- Platform-independent models, promoting system longevity and flexibility in deployment
- Executable models, built with a platform-independent action language increasing model level of abstraction, quality and developer productivity
- Transformation of models to implementation, allowing higher run-time performance through automated optimizations not feasible with hand-written code.

If you wish to find out any more information about MDD or MDA, please contact us at info@pathfindermda.com.

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