



Project Technology's BridgePoint and DesignPoint

The heart of Project Technology's toolset is a metamodel of executable semantics for MDA's™ platform-independent models (PIMs), comprising UML™ diagrams and an action-semantics compliant action language. The Model Builder captures PIMs that conform to MDA in a repository based on the metamodel. The Model Verifier is a platform-independent model interpreter. Developers can establish sets of initial conditions, step through the execution state by state or action by action, and modify the model, if needed, as the model executes.

DesignPoint is a suite of products, each of which is a model compiler. Each model compiler embodies a platform-specific model (PSM) with a set of translation rules that compiles a PIM into a specific enterprise deployment model (EDM). Some model compilers generate multi-tasking PSMs with persistence with an EDM target of C++; others generate a single task sitting directly on the silicon without the necessity for an embedded operating system into a C EDM. Every model compiler is completely open, allowing developers the freedom to modify the PSM directly, or to build their own platform-specific model.

Each DesignPoint model compiler relies on BridgePoint's Generator, which accesses the PIM stored in a repository and applies the model compiler's rules to generate text-text that can be for any programming language, conforming to any API and any coding standards.

Shaun Greener, Project Technology's VP of Marketing said "Our customers already benefit from the principles behind MDA. Some are generating more than two million lines of C++ from PIMs, while others are using optimized model compilers to produce small quantities of C code for highly constrained environments such as pacemakers. End-users of these products benefit from the ability to interpret the models to know they're correct before generating code for any target."

Stephen J. Mellor, CTO and Chair of the UML Action Semantics Submission Consortium, added "The most exciting aspect of OMG's MDA initiative is the notion of design-time interoperability. We hope soon to see a standard for interchange of the semantics of models so that user can select between best-of-breed model builders, model verifiers, test-vector generators, state space provers, model compilers and so on. MDA enables the creation of a tool chain for executable modeling."