Cameo Systems Modeler

No Magic’s Cameo Systems Modeler is a Model-Based Systems Engineering (MBSE) solution in one easy-to-use package, enabling single users or an entire engineering team to create, collaborate, and manage systems requirements and designs.

Cameo Systems Modeler is based on the award-winning MagicDraw modeling platform. The solution retains all the best diagramming, teamwork, persistence and documentation capabilities, while offering more customized capabilities tailored to systems engineering needs.

Quick Start with SysML-Lite

No Magic spent about a year researching and collaborating with many of the renowned elite systems engineering experts, devising a way to simplify the transition from traditional to a Model-Based Systems Engineering approach.

As a result, No Magic is announcing the first implementation of the SysML-Lite concept, described in A Practical Guide to SysML, 2nd Edition, by Sanford Friedenthal, Alan Moore, and Rick Steiner:

“SysML-Lite is a simplified version of the language to help people get started modeling with SysML™. It includes six of the nine SysML diagrams, and a small subset of the available language features for each diagram kind. SysML-Lite provides a significant modeling capability.”

Cameo Systems Modeler is preconfigured, but not limited to a SysML-Lite view. Users may easily switch to a full-featured modeling environment with full SysML 1.3 and UML® 2.4.1 support as needed.

Manage Requirements

The increasing complexity of systems makes Requirements Engineering (RE) a critical phase in a system’s life cycle.

SysML requirements modeling constructs are intended to provide a bridge between traditional requirements management tools and systems models. Requirements can be imported, defined and depicted in graphical, tabular, matrix or tree structure format. A requirement can also appear on other diagrams to show its relationship to other modeling elements’ deriving, satisfying, verifying or refining requirements.

Integration with Cameo™ DataHub enables automatic synchronization and traceability to requirements in Rational® DOORS®, Rational® RequisitePro® and Microsoft Excel® (via CSV).

In addition to coverage and gap analysis, engineers may perform engineering analysis and check requirements compliance.
Accelerate Team Collaboration
In connection with Teamwork Server, multiple engineers can work on the same system model simultaneously.

It provides configuration management, controlled access to all your artifacts, integrations with LDAP, ClearCase and Subversion, and remote access to your model via secure SSL connection.

It’s the optimal way to decompose, change, track, baseline, branch, merge and compare your models while avoiding version conflicts even in offline mode.

Run Simulations, Optimizations and Trade Studies*
No Magic is the first in the industry to provide an extendable model execution framework based on OMG fUML™ and W3C SCXML standards.

Cameo Simulation Toolkit extends Cameo Systems Modeler capabilities and allows validating system behavior by executing, animating and debugging system behavior and parametric models in the context of realistic mock-ups of the intended user interface.

By executing constraint relationships in SysML parametric diagrams, systems engineers can run simulations and trade studies for complex systems from concept through final test. Mathematica®, OpenModelica® and MATLAB® Symbolic Math Toolbox™ or free built-in solver provide baseline equation solving.

Existing models in tools like MATLAB, Simulink®, and Mathematica can be easily wrapped as SysML constraint blocks and incorporated in the simulation.

In both traditional and non-traditional domains of system engineering, users can explore system performance, verify requirements, estimate cost, allocate resources and keep diverse models in sync.

Links between SysML and Excel® make it easy to import and export data.

* Cameo Simulation Toolkit is available separately.

Extend, Adjust and Tailor
To make sure Cameo Systems Modeler best fits your needs, besides predefined solutions, we are also offering a powerful extendibility solution based on domain-specific language (DSL) engine, customizable user interface, Open API, Macros engine, custom OCL constraints and customizable WYSIWYG reports.

Standard Support
The most complete OMG UML 2.4.1, SysML 1.3 and XMI 2.1 support on the market.

Automatic model validation allowing users to validate the conformity of SysML model against a set of built-in validation rules to ensure the model is well formed.

Interoperability
In addition to the standard OMG XMI and Eclipse EMF file format support, Cameo Systems Modeler is capable of models and diagrams exchange in proprietary IBM Rational Rhapsody, Enterprise Architect and Systems Architect, Vitec Core file formats.

Third-Party Plugins

• MBSEPak from Phoenix Integration – interface to PHX Model Center - graphical environment that integrates and executes analytical simulation tools and performs trade studies and design optimizations.

• MBSE plugin – a free open source plugin features Model Based Document Generation (DocBook XML), support for variants modeling and other recommendations from “Cookbook for MBSE With SysML.”

• ParaMagic plugin from Intercax LLC – a parametric solver with Mathematica®, OpenModelica®, MATLAB® and Excel® interfaces.


For more information about Cameo Systems Modeler, go to: http://www.nomagic.com/products/cameo-systems-modeler.html

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