



Vertex

accelerate
your product development

Vertex™ is an engineering system simulation tool coupling the power and flexibility of Modelica® modelling to parametric CAD, spreadsheets and control system design software, bridging the gap between engineering design and simulation.

Tight integrations with Pro/ENGINEER®, MATLAB®/Simulink®, Microsoft® Excel® and others enable design, simulation and control engineers to work from the same data improving efficiency and reducing errors.



Integrated

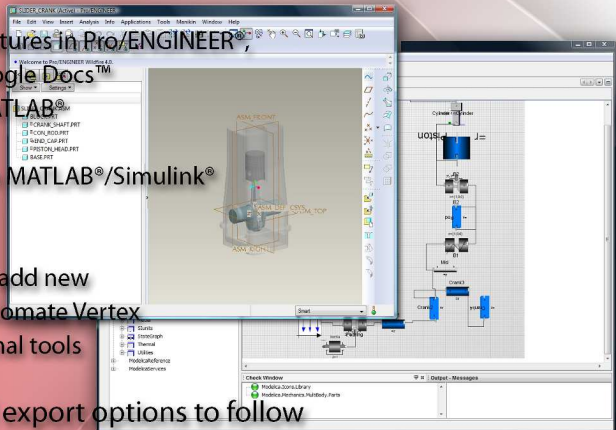
- Pro/ENGINEER® assemblies are automatically imported. There is no need to derive kinematic equations or run translators; the mathematical model is continuously updated to match the CAD assembly*

- Associate parameters with features in Pro/ENGINEER®, cells in Microsoft® Excel® or Google Docs™ spreadsheets or variables in MATLAB®.

- Run simulation internally or in MATLAB®/Simulink® together with control system*

- Comprehensive plugin API to add new features and external API to automate Vertex from MATLAB® and other external tools

- *other CAD interfaces and export options to follow

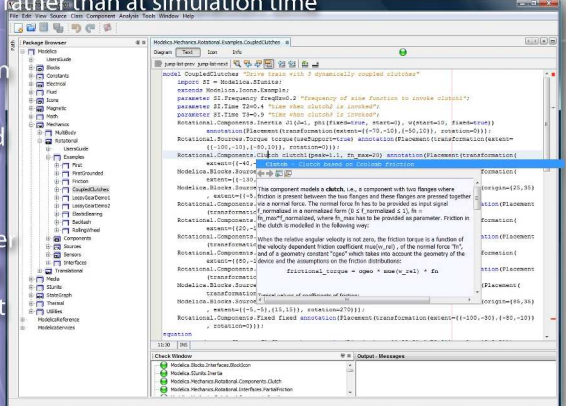


Easy to Learn

- The unique one-click auto-correction feature allows a solution for an error or warning to be selected and immediately applied. The current model and dependencies are constantly monitored and errors and warnings listed for the user to handle while building the model, rather than at simulation time

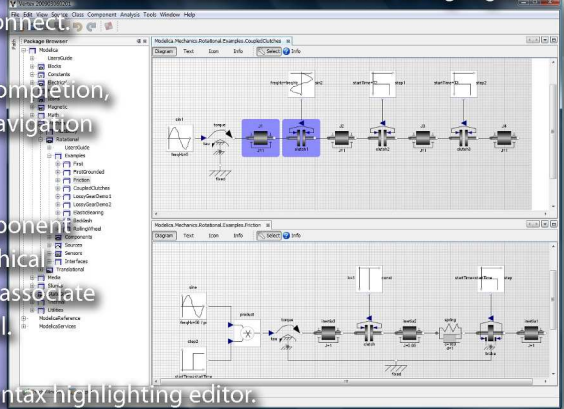
- In the code editor code-completion with documentation assists in both finding and understanding class and component definitions

- The built-in documentation browse can be used to read user guides and shows up-to-date information about any class, classes of interest can be loaded from the browser



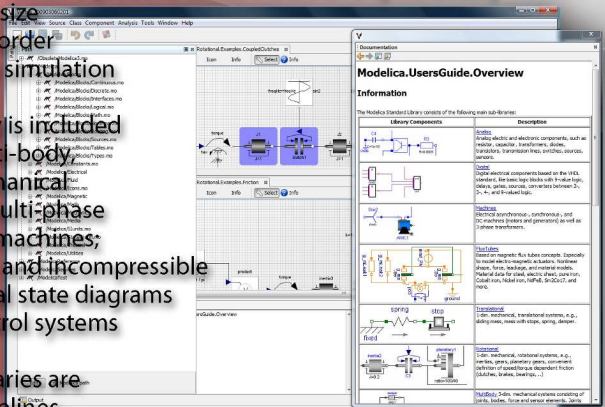
Easy to Use

- Build multi-body models from CAD assemblies, view in 2D schematic and add other system components.
- Drag and drop components in the schematic editor, click on connectors to highlight all possible connections and drag to connect.
- Write Modelica® code with code-completion, syntax highlighting and one-click navigation to class definitions.
- See parameter values for any component from the same window with hierarchical parameter view, edit their values or associate with CAD feature or spreadsheet cell.
- Edit html documentation with a syntax highlighting editor.



Powerful

- Modelica® is an object-oriented equation-based modelling language, which enables reuse of models and the development of libraries of models
- Prior to simulation Vertex™ gathers all equations in the model and symbolically manipulates them, reducing the size and complexity of the system in order to maximise the efficiency of the simulation
- The Modelica® Standard Library is included which enables modelling of multi-body rotational and translational mechanical systems; analogue, digital and multi-phase electrical systems and electrical machines; magnetic systems; compressible and incompressible thermo-fluid systems; hierarchical state diagrams and input/output blocks for control systems
- Other free and commercial libraries are available in a wide range of disciplines



deltatheta aims to revolutionise modelling and simulation in engineering, and bring model-based engineering firmly into the design process. Our software tools are "designed for engineers by engineers" with user interface and integration into tools and processes taking priority.

Vertex

Working With Us

- Online issue tracking
- Online knowledge base
- Email and telephone support
- Continuous integration
- Software builds available online immediately after changes made
- Implementation of specific features
- Training

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