MapleSim™ LabVIEW® / VeriStand™ Connector

With the MapleSim LabVIEW®/VeriStand™ Connector, you can extend your LabVIEW and VeriStand applications by integrating MapleSim's high-performance, multi-domain environment into your existing toolchain. The MapleSim LabVIEW/ VeriStand Connector accelerates any project that requires high-fidelity engineering models for hardware-in-the-loop applications, such as component testing and electronic controller development and integration.

Key Benefits

- Complex engineering system models can be developed and optimized rapidly in the intuitive visual modeling environment of MapleSim.
- The high-performance, high-fidelity MapleSim models are automatically converted to user-code blocks for easy inclusion in your LabVIEW VIs and VeriStand Applications.
- The model code is fully optimized for high-speed real-time simulation, allowing you to get the performance you need for hardware-in-the-loop (HIL) testing without sacrificing fidelity.

Key Features

- Exports MapleSim models to LabVIEW and VeriStand, including rotational, translational, and multibody mechanical systems, thermal models, and electric circuits.
- Creates ANSI C code blocks for fast execution within LabVIEW, VeriStand, and the corresponding real-time platforms.
  - Code blocks are created from the symbolically simplified system equations produced by MapleSim, resulting in compact, highly efficient models.
  - The resulting code is further optimized using the powerful optimization tools in Maple, ensuring fast execution.
- Supports all continuous MapleSim model domains, including mechanical systems and electric circuits.
- Produces blocks for complicated systems that are not normally tractable, such as systems that include algebraic loops or have index-2 or higher DAEs.
- Generates multi-input and multi-output blocks with a user-definable parameter terminal, so the block can be used immediately once created.
- Supports models that include MapleSim custom components, automatically incorporating any user-defined procedures.
- Provides an easy-to-use MapleSim template with an intuitive step-by-step interface for setting parameters and options, browsing generated code, and exporting models to LabVIEW and VeriStand.

- Includes a set of Maple language commands, which provides programmatic access to all functionality as an alternative to the interactive interface and supports custom application development.
- Supports both the External Model Interface (EMI) and the Simulation Interface Toolkit (SIT).
- Allows generated block code to be viewed and modified.
- Automatically generates an HTML help page for each block for easy lookup of definitions and parameter defaults.

www.maplesoft.com | info@maplesoft.com
Toll-free: (US & Canada) 1-800-267-6583 | Direct:1-519-747-2373

Maplesoft™
Mathematics • Modeling • Simulation