A Modelica-compliant Platform for System Simulation

LMS Imagine.Lab AMESim

LMS has incrementally incorporated Modelica support in LMS Imagine.Lab AMESim, widely recognized today for modeling and analysis of multi-domain, intelligent systems to predict their performances. To create a system simulation model in LMS Imagine.Lab AMESim, users can take advantage of packaged solutions including specific tools and application libraries of pre-defined components for different physical domains. LMS will continue to play a significant role in various Modelica-related pan-European projects as well as continuing Modelica developments. The LMS’ strategy is to offer an open system simulation platform for multi-domain systems and application-specific capabilities. Supporting the Modelica Standard extends the existing capabilities of LMS Imagine.Lab AMESim to include native AMESim as well as Modelica-based models.

Editor: Writing of Modelica code
Seamlessly write Modelica code with the Modelica Editor and import from existing Modelica codes.

Assembly: Graphical Edition of models from Modelica components
Graphically assemble Modelica models in a sketch.

Import: Creation of AMESim components based on the Modelica code
Import Modelica components to combine them with non-Modelica components in a single tool.

Existing AMESim features: Modeling, Simulation and Analysis of complete systems
Take advantage of the straightforward modeling and simulation capabilities of AMESim.
Editor: Writing of Modelica code

- Write Modelica code using an interactive code editor with real-time syntax checking and customizable syntax highlighting capabilities.
- Browse the model hierarchy of a Modelica file with the Source Code Browser.
- Read the online Modelica documentation using the integrated HTML browser.

Assembly: Graphical Edition of models from Modelica components

- Easily assemble Modelica components using the intuitive graphical interface of the Modelica Assembly Tool, leading to a major increase in the productivity to build models.
- Create a full Modelica model in the same way as using LMS Imagine.Lab submodels by building a sketch graphically.

Import: Creation of AMESim components based on the Modelica code

- Use Modelica code in the Modelica Import Assistant to create an AMESim component.
- Store the AMESim-Modelica component as any usual AMESim libraries, and select the components to be used in the Library Tree browser.
- Combine Modelica and non-Modelica models in a single tool.

Existing AMESim features: Modeling, Simulation and Analysis of complete systems

- Run the Modelica model as any non-Modelica AMESim model.
- Using the Import Assistant, connect AMESim-Modelica models to other non-Modelica AMESim components to build complete multi-domain systems.
- Couple mechanics, fluid, thermal and control algorithms for example, either with AMESim native models or with Modelica-based models.
- Take advantage of the AMESim Platform facilities: powerful numerical solvers, linear analysis, batch runs, software interfaces and scripting capabilities.