

Template Based XML and Modelica Unparsers in OpenModelica

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At PELAB, together with the Open Source Modelica Consortium (an international open source effort supported by 28 organizations, see www.openmodelica.org) the OpenModelica environment including the OpenModelica Compiler (OMC) of the Modelica language including MetaModelica extensions is developed. The development is open source under the OSMC-PL and GNU V3 licenses.

Currently OMC compiles Modelica/MetaModelica into C-code via several optimizing steps. The development is supported by an Eclipse plug-in MDT (Modelica Development Tooling), also including a debugger.

An unparser is a program that transforms abstract syntax into text. Currently there exist hand-written unparsers for OpenModelica AST into Modelica text and a subset of this into XML. Recently an efficient text template language has been developed for OpenModelica that makes such programming easier and more wellstructured. The goal of this project is to develop new Modelica and XML unparsers using the text template language. The XML unparser should be according to an XML standard defined in the OPENPROD EU project.

The master thesis project requires some knowledge of compiler construction, as well as some experience and interest in advanced programming.

