

Modelica-Association-Project “System Structure and Parameterization” – Early Insights

Abstract

Starting with the motivation to invent the new standard SSP (“System Structure and Parameterization”) within the Modelica Association and the need to have one more standard beyond the mature Modelica language and the already well established Functional Mockup Interface (FMI) proposed in Modelica Association (Blochwitz *et al*, 2011), the main use-cases are presented where SSP can help. As SSP relies on XML, the schemas and in consequence the main features for defining system structures and parameterization of models are described. The need to be able to transport complex networks of FMUs between different simulation platforms like MIL, SIL and HIL is emphasized as a motivator for SSP.

A variety of prototypes are shown that support the early version of SSP. This gives a good impression how the standard can be used for quite different tasks and proofs, that system structures can be exchanged between them seamlessly.

Finally the next steps for the ongoing development of SSP are outlined.

Keywords: FMI, System Structure, Parameterization, Collaboration, Standardization