

Abstract

This thesis aims the creation of a tool, which can be helpful during the development of AUTOSAR software components. First of all, the steps of the project are clarified and the possible ways of solution are discussed. After that, the technologies and tools applied in the course of development are presented, particularly the AUTOSAR standard and the domain specific languages.

Afterwards the construction of the software components defined by the standard and the applied DSL are introduced. To help the understanding, an illustrative model is created and some example component creation are shown.

The mapping between the DSL and the AUTOSAR elements is discussed in chapter five along with the development of the software and its main challenges.

The extension of the grammar and the related solution are described after that. The description of the elements of a newly created DSL and the functionality used by the illustrative model are shown in chapter six.

During testing, two different methods were used. The reasons for this and the exact methods are discussed. Finally the summary of the work and further development possibilities are demonstrated.