Offene Abschlussarbeit mit dem Thema:

**Autosar BMW**

**Typ:** Bachelorarbeit  
**Beginn:** 2017-01-10 00:00:00  
**Gutachter:** Prof. Dr. Manfred Reichert  
**Betreuer:** Julian Tiedeken  
**Projekt:** -  
**Raum:** 552  
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**Kurzbeschreibung:**

An Eclipse based tool chain exists that aggregates several BMW databases providing developers (one or many) with valid and consistency checked AUTOSAR export to configure their ECUs. The tool works in an own defined Metamodel and facilitates users to create so called plugins to access, report or adapt the data in the model.

One of the plugins is used for configuring and generating (model and source artifacts) of an AUTOSAR based communication component. If the input model is inconsistent, the communication component model might contain broken or missing connections. This leads to the generation of wrong source artifacts. In order to achieve a consistent model, each functionality should be extensively tested to ensure that changes or broken functionalities are detected and fixed as early as possible.

The tool chain provides different options to validate the input models through a dedicated plugin.

**Tasks:**
- Evaluate the strategies for validation of the communication component model  
- Develop and implement a validation concept based on the evaluation  
- Understand the communication component specification for creating test data

**Knowledge on the following technologies is required in order to complete the task:**
- UML  
- Java/Xtend Programming  
- Eclipse IDE and Eclipse Modelling Framework  
- AUTOSAR 4 basics - RTE, SWC  
- JUnit

**Weitere Informationen:**