

## **ABSTRACT**

The further automation of the test development process beyond the automatic execution of tests is an increasing challenge, because the development of new functionalities has a higher pace than the test development. The use of model based techniques combined with test generation methods enable a fast test de\_nition while the test oracle is calculated automatically. The presented approach was implemented in a research prototype, which was used to generate test cases out of an UML state chart model describing the behavior of the system under test. The resulting test sequences were executed on a hardware in the loop (HiL) and showed its applicability in an industrial setting.