

Abstract. A well-founded testing theory encourages the practical application of test case generation techniques. This aims at overcoming the ever increasing complexity of software-enabled systems in the automotive industry. In this article we report on transforming UML Statecharts to the formal language LOTOS. Both, the successful usage of UML Statecharts in our industrial setting and the availability of mature research prototypes for test case generation supporting LOTOS suggest this transformation. Our novel transformation manages to preserve the semantics of the UML Statechart, allows for treatment of UML-like events and preserves the atomicity of transitions in the UML Statechart. Moreover, we present `_rst` results on the test case generation for our industry example.