

Titel

Fokus!MBT and ModelBus – Heading Towards Test Automation

Abstract

Model-based testing promises to mitigate several challenges traditional testing approaches still possess. By relying on semi-formal models, implicit knowledge is made explicit. Furthermore, model transformations increase the degree of test automation significantly, avoiding repetitive and resource-consuming manual tasks which are prone to errors. Fokus!MBT is a domain-independent and highly adaptable tool chain, mainly based on Eclipse technologies. It consists of a compound set of test-related services which interoperate, so that testing landscapes can be tailored that fit specific needs. Fokus!MBT services operate on a proprietary metamodel for testing purposes (TestingMM). In this presentation, we show how parts of a test process are automated by integrating Fokus!MBT with ModelBus, a service-oriented communication and tool integration platform. A key aspect is to keep track of the system requirements throughout the entire process. In the first part of the scenario, we show how requirements, expressed as ReqIF instances captured with ProR, are translated into an initial system model, which is then used for both system and test modeling. The modeling is accomplished in Papyrus, using UML, SysML and the UML Testing Profile. Afterwards, executable TTCN-3 test code is generated, which is then executed within TTworkbench. The test results are subsequently fed back into the test model to perform further analysis and to generate a test report. The orchestration of the process flow within ModelBus is achieved by using BPMN.

Keywords: Model-based Testing, Test Automation, Fokus!MBT, ModelBus, UML, UML Testing Profile.

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