



MOMUT - AUTOMATED TEST DESIGN

Software has become an integral part of most technical systems and often is the major contributor of value. Software never has been more important than today.

The big challenge manufacturers of all industries are facing is to make software **code as safe and fault free as possible** as software is more prevalent, but also **more complex and more critical than ever before**. Accepting this challenge turns out to be more difficult than commonly assumed because average code will contain 15 to 50 faults per 1000 lines delivered. Today, a premium-class vehicle for example will contain upwards 100 million lines of software code.

MOMUT - AUTOMATED SOFTWARE TESTING

To mitigate the threat posed by low software quality to business, software testing is generally applied and will improve the error rate considerably. Keeping the increasing product complexity in mind, **automated and model-based software testing** is of inevitable value. Not only will automation help counter balancing the ever increasing size of software systems but it will also generate a "proper set" of test cases that guarantees a certain (selectable) test coverage over the given specification that would be difficult and very expensive to attain with manual testing.

MoMuT was designed with this in mind. **At heart it is an efficient, automated test case generation tool.**

It will take a behavior model of your system and support you in unit, integration, system and acceptance testing of functional as well as non-functional aspects.

Apart from automated test design it can also provide feedback about the quality of your existing test suite, extend a given test suite, and help with fault localization.

KEY FEATURES

- Generates **multi-concern tests** from one model: correctness, performance, safety, security
- **Selectable generation strategies:** random, fault driven, coverage driven, cost driven
- Multiple input **modeling languages:** e.g. UML, Event-B, Domain Specific Languages (DSLs)
- **Incremental generation** (re-use existing tests)
- Fit for **complex reactive systems** (e.g. railway interlocking)

BENEFITS

- Reduced testing efforts and costs
- Improved test quality
- Fine grained control over test coverage

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