Transforming Erlang finite state machines

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Model driven development approaches help to alleviate the abstraction gap between high-level design and actual implementation, to aid design, development and maintenance of industrial scale software systems. To provide automatic, easily usable tools for stakeholders, model driven development essentially relies on efficient and expressive translations between the program source code and the model.

In this paper, we present a declarative, rule-based approach to deterministically transform Erlang [**?**] program sources that satisfy a certain syntactical constraint, into valid UML models of state machines. The transformation relies only on static analysis techniques, and the produced model conforms to the state machine metamodel defined in OMG UML 2.0 [**?**]. The transformation is based on the static source code analysis and transformation framework, RefactorErl [**?**, **?**]. We also briefly evaluate our implementation of the method based on performance measurements of the algorithm and a few basic metrics of the output. Lastly, we discuss how this approach can be extended to obtain structurally and semantically more rich models.

References

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