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   Sommario/riassunto   UML state machines are widely used as test models in model-based testing. Coverage criteria are applied to them, e.g. to measure a test suite's coverage of the state machine or to steer automatic test suite generation based on the state machine. The model elements to cover as described by the applied coverage criterion depend on the structure of the state machine. Model transformations can be used to change this structure. In this paper, we present semantic-preserving state machine transformations that are used to influence the result of the applied coverage criteria. The contribution is that almost every feasible coverage criterion that is applied to the transformed state machine can have at least the same effect as any other feasible, possibly stronger coverage criterion that is applied to the original state machine. We introduce simulated satisfaction as a corresponding relation between coverage criteria. We provide formal definitions for coverage criteria and use them to prove the correctness of the model transformations that substantiate the simulated satisfaction relations. The results of this paper are especially important for model-based test generation tools, which are often limited to satisfy a restricted set of coverage criteria.