

Proof of concept implementation

Proposals shall describe a proof of concept implementation that can successfully execute tests from the conformance test suite, without violating any tests from the PSCS conformance test suite

The prototype (i.e. proof of concept implementation) implements the execution model that is proposed in section [XX] of this specification. It is integrated to the Papyrus model execution framework Moka [1] as a specific execution engine.

Abstract syntax

Papyrus and Moka tooling are based on the UML meta-model implementation of Eclipse. Therefore models that can be interpreted by the prototype must conform to this meta-model.

Execution model

The execution model implemented by the prototype is built on top of the one defined to capture semantics of UML composite structures. The prototype is able to execute any model conforming to subset that is covered both by fUML and PSCS. In addition it also able to execute models including syntax elements that are covered by the subset of behavior state machines identified in this specification (see section [XX]).

Test suites cohesion

In order to verify that the PSSM does not violate the assertions defined for PSCS we proceeded in the following manner:

1. The PSCS test suite was executed by using only the implementation for the PSCS execution model. This execution enabled us to produce the reference trace.
2. The PSCS test suite was then executed with the prototype implementation of PSSM. This execution enabled us to produce the trace that need to be compared to the reference.

The diff check that was performed between the two traces did not highlighted any difference. To conclude, we can say that if the traces are equal then PSSM prototype does not violate the semantics that was captured in PSCS.