What's new in Cameo Simulation Toolkit 18.0 LTR

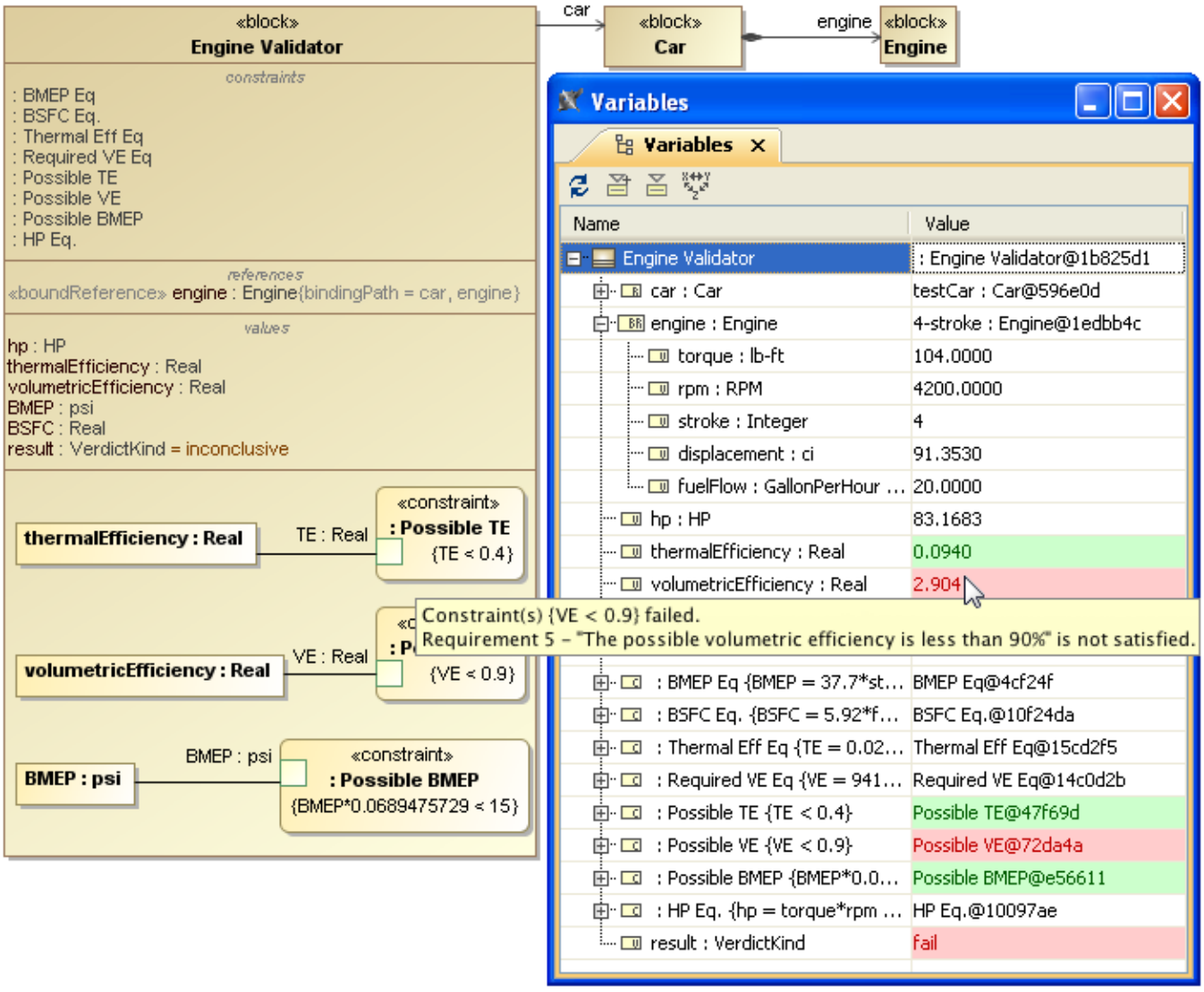
Release date: 2nd June 2014

Enforcing Runtime Constraints and Requirements

Cameo Simulation Toolkit adds additional capabilities to evaluate and enforce various system constraints:

- Constraint Blocks' Boolean expressions, e.g. {heat < 53}, where "heat" is a constraint parameter.
- UML Constraints for a Block, constraining properties, e.g. {thermalEfficiency <= 0.4}, where "thermalEfficiency" is a value property name.
- Basic Interval distribution range on value properties e.g. «interval» {min = 0.0, max = 2.5}.

In the case of any constraint failure, execution can immediately stop as if there is a breakpoint set. Failed constraints and incorrect values are highlighted in red, showing a failing constraint or requirement text. The engineer can explore system runtime configuration and states to identify the reason for this failure.



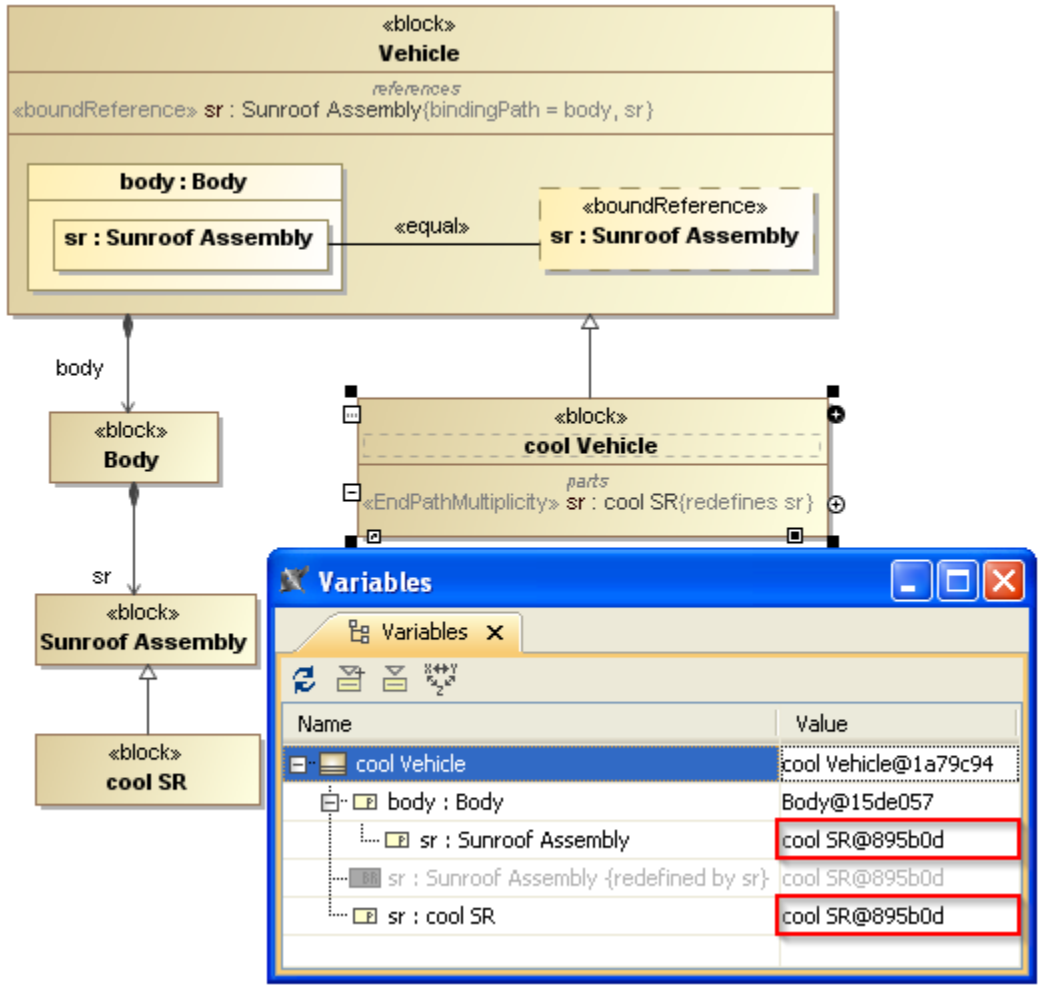
More SysML Concept Support

Full and proxy ports

Blocks owning full and proxy ports are fully supported now, providing refined OMG specifications for executable UML (Precise Semantics of UML Composite Structures). Both full and proxy ports will have a runtime Objects now - one representing a part on a boundary, the other owning block or exposed nested part object. Flow properties matching at opposite connector end are also supported.

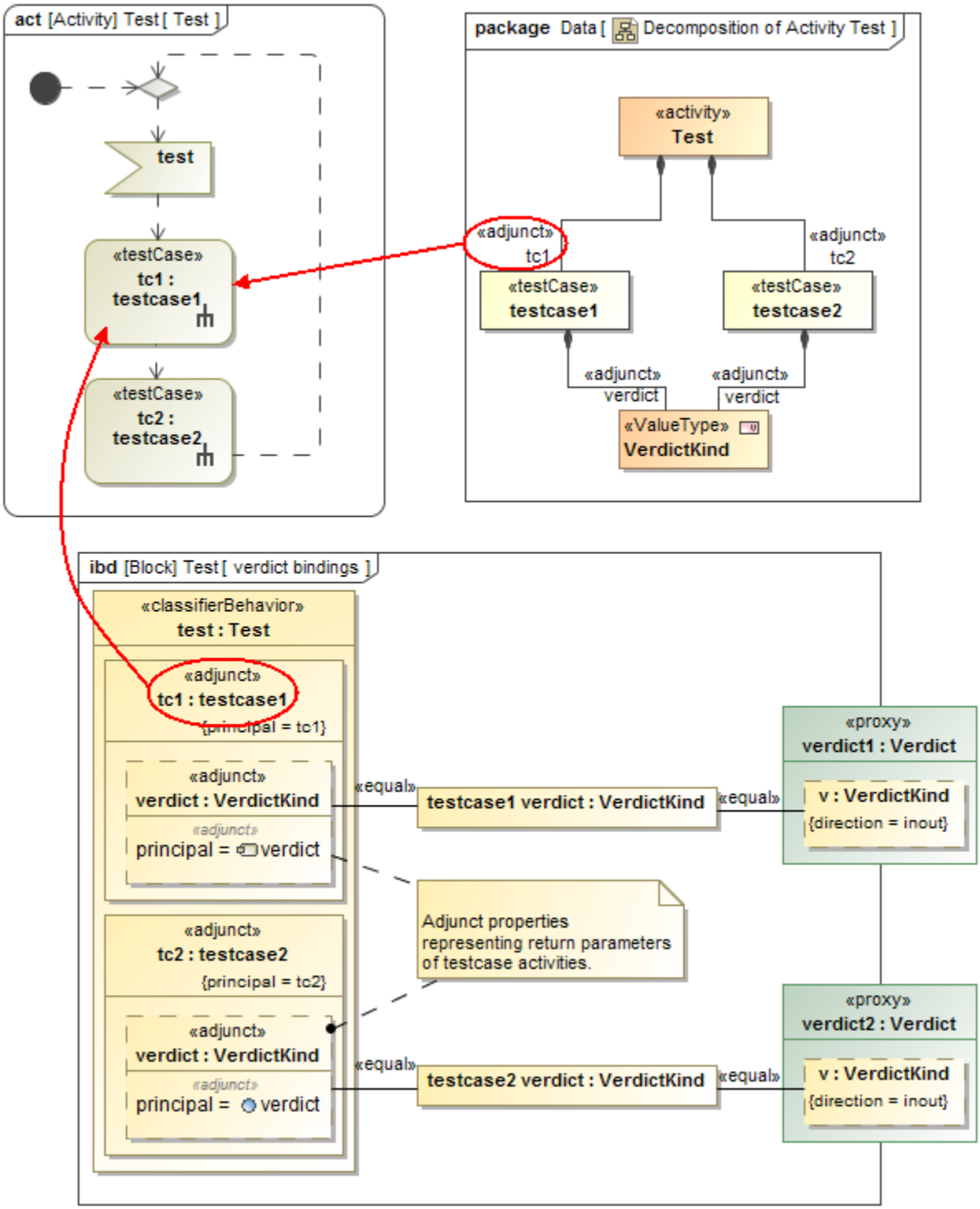
Bound Reference

Bound Reference provides a modeler with a new way to quickly redefine a deep nested system part, without considerable modeling efforts as before. It is also used as a “mounting point” for alternative configurations of the system part during trade study iterations.



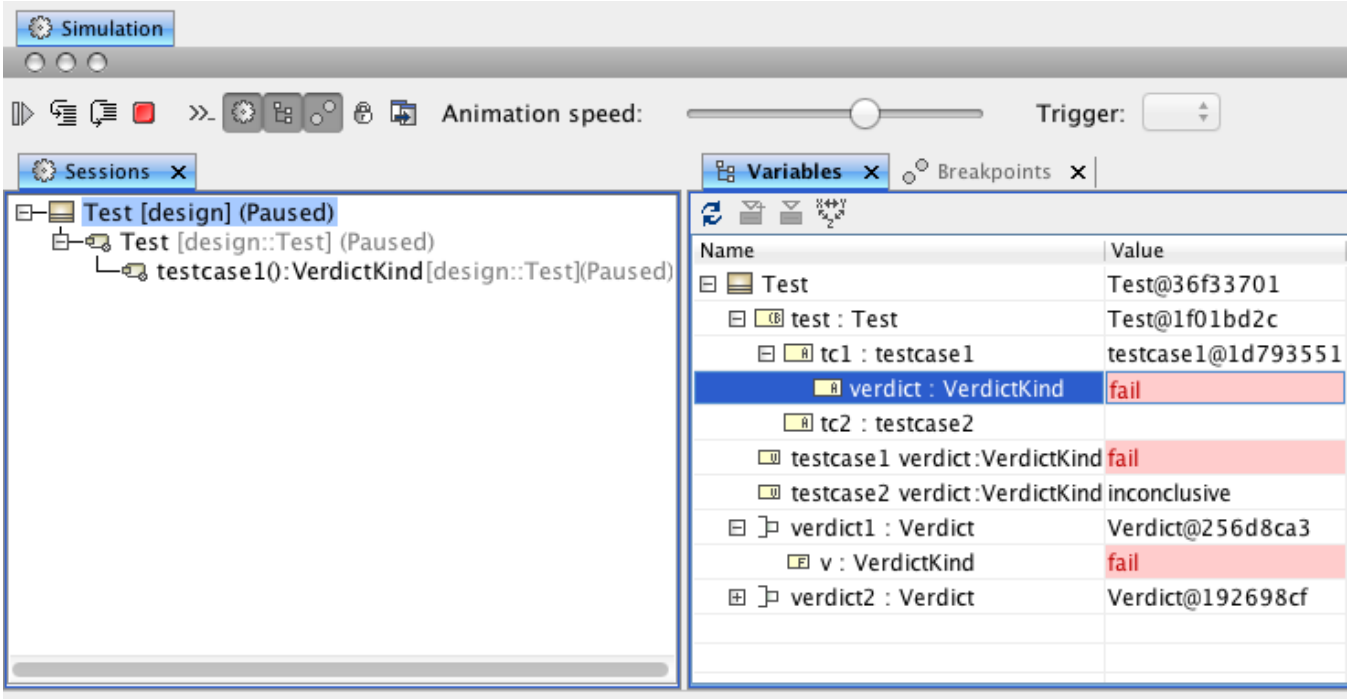
Adjunct properties

Adjunct properties are a new kind of property, representing executing behaviors, flowing tokens or parameter values. By using these properties in SysML parametric diagrams, one can enforce additional behavioral constraints or check output values function or test case returns.



Testcase and VerdictKind

For better model-based testing support, Cameo Simulation Toolkit adds a special interpretation of Behaviors with a «TestCase» stereotype applied. The execution result, which is a special VerdictKind value (normally “pass” or “fail”) is highlighted in green or red color in the Variables panel with an additional navigation and tooltip showing a verified requirement text.



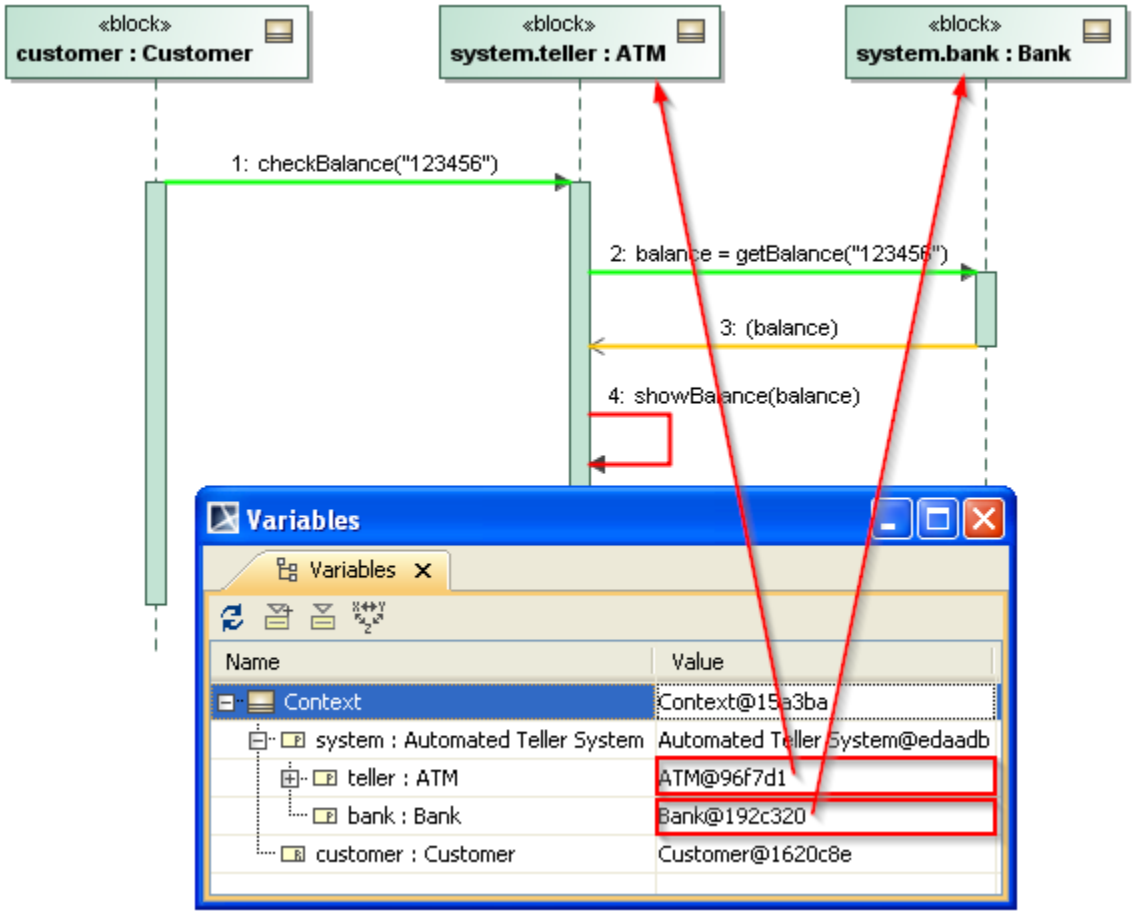
Sequence Diagram Execution Enhancements

Return value assignment

The value returned from an operation call message in an interaction execution now can be assigned to the property or to the parameter.

Lifelines for nested parts

Cameo Simulation Toolkit allows executing and recording messages to any nested part of interaction context, making test cases and block behavior definitions more compact.



Fixed Issues

To open the list of publicaly available or your own issues those have been included into version 18.0 LTR, click here.