

Business Process Verification

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Abstract: Models of commercial systems reflect either the statical structure or the dynamic behavior of a system. The dynamic aspects are the business processes and their models.

Whereas the static relations in a system may be expressed by Boolean logic, the dynamic activities and their temporal sequences ask for a better formalism, e.g. temporal logic. Temporal logic is based on Boolean logic extended by operators expressing the temporal order of states. In general there are different technologies to verify temporal sequences. Our choice is the model checking concept.

In the paper we present examples of business process models and how these models may be checked. We introduce a model to specify the rules (rules model) and demonstrate how the results of the checks can be displayed in the business process models. These models and the rules are represented in a graphical editor. Both models are transformed into a formal language which may be processed by a verification tool - a model checker in our case. The results are then visualized in the graphical editor indicating where the model violates or keeps the rules.