Modeling and Analysis of Business Processes with Business Rules

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Abstract

Visual business process representation languages such as BPMN are a useful tool for specification of business processes. However, practical verification and execution of Business Process Models is a challenging task. One solution to this problem is integration of business processes with business rules, which provides a flexible runtime environment. This chapter concerns Business Process Models as a visual inference specification method for modularized rule bases. To provide the background for this approach, selected analysis and execution methods for Business Processes, such as BPEL and BPMN tools, are presented. Business Processes can be supported with Business Rules as executable logic. Rule-Based Systems have well-established methods for verification and optimization. This chapter presents selected rule-based solutions, such as Drools and XTT2 – a novel visual rule specification that provides formalized analysis – as well as their integration with BPMN as a visual method for inference specification. The proposed BPMN+XTT2 solution combines flexible business process modeling provided by BPMN with verification and execution features of XTT2.

Keywords: Business Process, Business Rules.

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