On the Suitability of BPMN for Business Process Modelling

This dossier looks at a detailed analysis of BPMN, with a view to discovering its strengths and weaknesses in the construction of business process models, with the aim of a broader study that encompasses the main modeling engines such as UML 2.0 AD and BPEL. By using the workflow model framework to carry out the evaluation, it is possible to obtain a multi-level analysis of BPMN's expressive capabilities, its ability to model processes, areas for improvement, and to facilitate comparisons with related languages, making it an innovation in this field.

Previous studies have assessed the quality and ontological standards of BPMN, using the semiotic quality framework and relying on the Bunge Wand and Weber (BWW) framework, which is broader but less specialized than the workflow pattern framework. In addition, it offers an examination of BPMN's functionality from the point of view of control flow based on workflow patterns, albeit with identified limitations and ambiguities.

In this paper, we provide a comprehensive evaluation of BPMN from the control flow, data and resource points of view, followed by a discussion and comparison with the evaluations of UML 2.0 AD and BPEL.This section evaluates BPMN's Control-Flow Perspective concerning its representation of twenty common control-flow modeling requirements based on the Workflow Control-flow Patterns, contrasting findings with those of a review by White, while referring to a technical report for further analysis of discrepancies and identified flaws.