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Title

Comparing Textual Descriptions to Process Models – The Automatic Detection of Inconsistencies (van der Aa, Leopold, and Reijers (2017))

Abstract

Many organizations maintain textual process descriptions alongside graphical process models. The purpose is to make process information accessible to various stakeholders, including those who are not familiar with reading and interpreting the complex execution logic of process models. Despite this merit, there is a clear risk that model and text become misaligned when changes are not applied to both descriptions consistently. For organizations with hundreds of different processes, the effort required to identify and clear up such conflicts is considerable. To support organizations in keeping their process descriptions consistent, we present an approach to automatically identify inconsistencies between a process model and a corresponding textual description. Our approach detects cases where the two process representations describe activities in different orders and detect process model activities not contained in the textual description. A quantitative evaluation with 53 real-life model-text pairs demonstrates that our approach accurately identifies inconsistencies between model and text.

Keywords

Business process management, Business process modeling, Compliance checking, Inconsistency detection, Matching, Natural language processing

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Reference

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Aa, Han van der, Henrik Leopold, and Hajo A. Reijers. 2017. “Comparing Textual Descriptions to Process Models – The Automatic Detection of Inconsistencies.” *Information Systems* 64 (March): 447–60. https://doi.org/10.1016/j.is.2016.07.010.