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Process Representation and Reasoning Language; The Process Frame; Code Generation for Process Knowledge; Synthesis of precedence rules for data flow management; Code Synthesis for Iterative Actions; Soundness and Completeness of Process Models; Optimization of the Synthesized Process Code; Reasoning with Process Models; Analysis of Process Executions by SMEs; Towards Knowledge Provenance in Process Analysis

Problem Solving Methods for the Analysis of Process ExecutionsA

Knowledgeoriented Provenance Environment; An Algorithm for Process Analysis Using PSMs; Evaluation; Evaluation of the DarkMatter Process Component for Acquisition of Process Knowledge by SMEs; Evaluation Syllabus; Distribution of the Formulated Processes across the Evaluation Syllabus; Utilization of the PSM Library and Process Metamodel; Usage Experience of the SMEs with the Process Editor; Performance Evaluation of the Process Component; Evaluation of KOPE for the Analysis of Process Executions by SMEs; Evaluation Settings

Evaluation MetricsEvaluation Results; Evaluation Conclusions;

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Sommario/riassunto

The development of knowledge-based systems is usually approached through the combined skills of knowledge engineers (KEs) and subject matter experts (SMEs). One of the most critical steps in this activity aims at transferring knowledge from SMEs to formal, machine-readable representations, which allow systems to reason with such knowledge. However, this is a costly and error prone task. Alleviating the knowledge acquisition bottleneck requires enabling SMEs with the means to produce the desired knowledge representations without the help of KEs. This is especially difficult in the case of compl
