

## Behavior Consistency Analysis for Workflow Nets Based on Branching Processes

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**Abstract :** Loop structure often appears in the business process modeling, analyzing the consistency of corresponding workflow net models containing loop structure is a problem, the existing behavior consistency methods cannot analyze effectively the process models with the loop structure. In the paper, by analyzing five kinds of behavior relations of transitions, a three-dimensional figure and two-dimensional behavior relation matrix are proposed. Based on this, analysis method of behavior consistency of business process based on Petri net branching processes is proposed. Finally, an example is given out, which shows the method is effective.

**Keywords :** workflow net, behavior consistency measures, loop, branching process

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