

ABSTRACT

Among many models of business processes can lead to new problems such as business process models created duplicated between the business process model to another, causing repository becomes full or be diversity in the business process model. In addressing these issues, one way is by analyzing the similarity (similarity) between business process models. Analysis of the degree of similarity of business processes is needed in the simplification and unification of various existing business processes.

Analysis was conducted on the behavioral aspects, since behavioral similarity has advantages rather than label and structural similarity where at the time of measurement similarity, pay attention so that the relationship is not directly obtained similarity calculation does not decline. The method used is the Causal Footprints, a graph for between two nodes represents the behavior of a business process model, called look-back and look-ahead links links. To support the process of similarity needs to be supported by process modeling language that has activity nodes and control nodes such as Business Process Model and Notation (BPMN) also has format XML data structure.

Tests carried out using three BPMN models are compared as query and variant. Based on test results, similarity BPMN first against second at 63% and vice versa, BPMN second to third by 79% and vice versa, and BPMN first to third by 70% and vice versa. Factors affecting the value of similarity as the number of nodes, the exchange of BPMN as a query with the variant, intersection and links.

Keywords : BPMN, behavioral similarity, causal footprints.