

BUSINESS PROCESS MODEL EVALUATION USING INTELLIGENCE THEORY METHODOLOGY

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Let us utilize the growing artificial intelligence research trend to formalize the human-centric analysis of BPMN (Business Process Model and Notation) models and their certain elements, by applying the comparator identification method originated from the intelligence theory [1].

Since BPMN models are de-facto standard tools of business process description, used to analyze, improve, implement, and automate workflows in organizational and information systems, they should be of high quality to effectively link business and engineering teams [2]. Moreover, erroneous BPMN may cause errors in real processes for the new workflows or signalize shortcoming of existing activities.

Let us apply the indirect identification method based on predicate logic, which takes any data (signals) as input and provides binary values (0 or 1) on output [1]:

$$P(x_1, x_2, \dots, x_n) = K(y_1 = f(x_1), y_2 = f(x_2), \dots, y_n = f(x_n)) = t,$$

where x_1, x_2, \dots, x_n are the input signals of the predicate P;

$y_1 = f(x_1), y_2 = f(x_2), \dots, y_n = f(x_n)$ are the internal signals;

K is the comparator with n inputs and a binary output $t \in \{0, 1\}$.

The idea of BPMN elements' comparator identification is shown in Fig. 1.

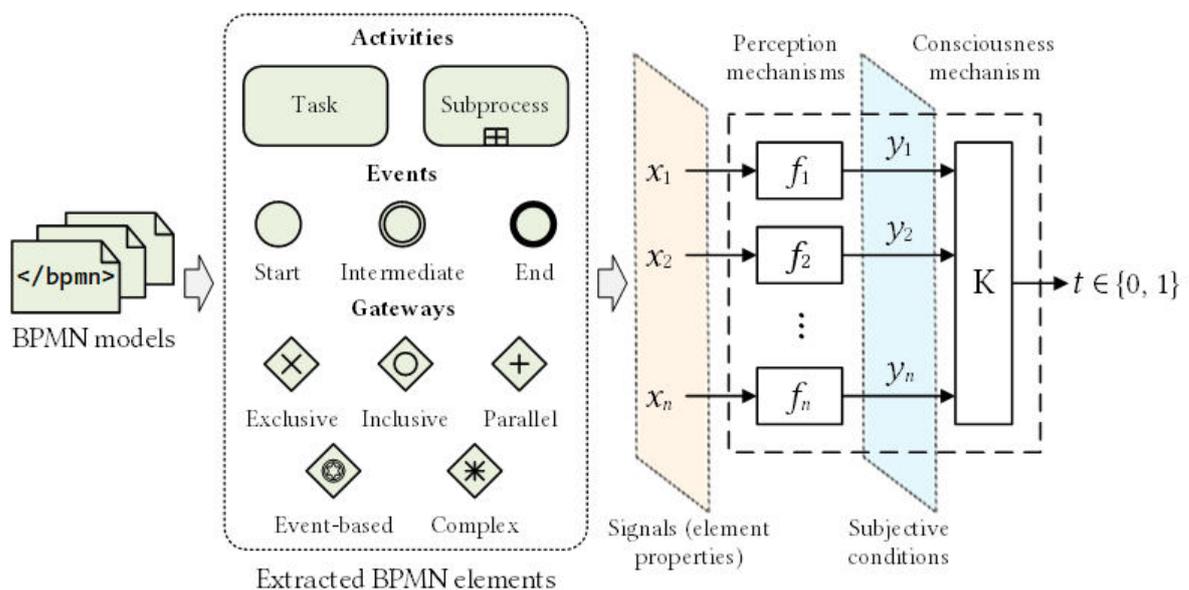


Fig. 1. – Using comparator identification approach to assess quality of BPMN models

References:

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