Reducing Exception Handling Complexity in Business Process Modeling and Implementation: The WED-Flow Approach

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The paper starts by introducing a novel approach of `WED-Flow` for modeling and implementation of business processes that significantly reduces the complexity of exception handling. The author then describes the three main phases this approach consists of: separation of business process, modeling of two separations and translation into a concrete specification language. The paper further describes the various definitions associated with WED-Flow approach and explain the concept with a nice example of Bookstore.

The paper introduces a new method of reducing exception handling and illustrated this with a bookstore example. Their WED-Flow approach addresses the integration of three main flow paradigms: work-flow (i.e., flow of activities), event-flow and data-flow. In contrast to the classical approach, WED-Flow approach reduces the lines of code needed to implement the high expressivity and the decidability of behavioral property checking by the programmers. Another strength of this paper is that their WED-Flow based approach does not require the information of the next step as it is automatically determined by means of transition from any data-state that satisfied certain conditions. Although this paper provide a new approach with examples, it fails to quantify the success of this approach.

The WED-Flow model discussed in `Implementation of a Transaction Model for Business Process Systems` is another variation of this paper in which the authors contributed by providing the support for transactional requirements imposed by business process application. They also presented an example of a famous business process (i.e., travel agency) article in order to illustrate how the WED-flow implementation solves some important and complex events of data and associates them with transactional properties.