An Overview of BPMN 2.0 and its Potential Use

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BPMN (Business Process Model and Notation) is an OMG standard for business process modeling that is widely adopted today. The OMG lists 62 tool vendors who offer products that support BPMN [3]. This success is based on the fact that BPMN provides a standardized graphical notation which is easy to use for business analysts, allowing them to document and communicate their business processes within their company and with their external business partners.

BPMN was introduced in 2002, standardized by the OMG in version 1.0 in 2006 [1] and version 2.0 [2] is currently being finalized by the OMG. Version 2.0 takes BPMN to a new level. It adds the following to the previous version:

– a standardized metamodel and serialization format for BPMN, which allows users to exchange business process models between tools of different vendors,
– a standardized execution semantics for BPMN, which allows tool vendors to implement interoperable execution engines for business processes,
– a diagram interchange format, allowing users to exchange graphical information of a business process diagram,
– an extended notation for cross-organizational interactions (also known as *process choreographies*), which enables new use cases for automated tool support for processes that involve several business partners,
– a detailed mapping from BPMN to WS-BPEL, which demonstrates the alignment of BPMN with existing tools and standards, and
– some additional modeling elements for processes such as non-interrupting events and event subprocesses.

Among the many benefits of these additions, two are noteworthy in particular. Firstly, the standardized interchange supports collaboration between different organizations within and across different enterprises. A BPMN diagram created in some part of a company can be corrected, refined, complemented, analyzed or executed somewhere else using different tools of possibly different tool vendors.

Secondly, BPMN 2.0 is the first notation and interchange format that combines business user-friendly modeling with the detailed technical specification of an executable model within the same process model. This fosters collaboration between business analysts and technical developers of the IT system that supports the business. Together with the increasingly common (web-based) business process collaboration tools, this enables more agile approaches to the development and adaptation of information systems.

BPMN 2.0 defines a rich notation and modeling language that can be used in different ways and different scenarios. For example, one company could use

BPMN to model their internal processes in order to analyze and improve them. Another company could use BPMN to model their interaction with business partners within a particular supply chain. A third company might use BPMN to define their fully or partially automated production workflow that is executed by a powerful execution engine.

In the talk, we give an overview of such scenarios and the corresponding modeling elements that are used in these scenarios. Not all of these scenarios will be supported by every BPMN tool. This is reflected by the fact that the BPMN 2.0 specification provides different conformance classes to suit specific scenarios. The specification [2] defines Process Modeling Conformance, Process Execution Conformance, BPEL Process Execution Conformance and Choreography Modeling Conformance. Process Modeling Conformance is subdivided along different classes of process diagrams, into Descriptive, Analytic and Common Executable. In the talk, we also relate these conformance classes to the various uses of BPMN.

References

1. OMG. Business process modeling notation (BPMN) version 1.0, OMG document number dtc/06-02-01. 2006.
2. OMG. Business process model and notation (BPMN) version 2.0, OMG document number dtc/2010-05-03. 2010.
3. OMG, Business Process Management Initiative, BPMN Implementors Listing, `http://www.bpmn.org/BPMN_Supporters.htm` , accessed on June 2, 2010