

The BPMN Wish List Revisited

by

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In recent articles, people have expressed some desires and concerns regarding BPMN. Some of them are actually already addressed by the latest version of the specification, while others could be reformulated for consistency.

I'd like to address some specific points. During the past five years, I have been acting, on behalf of MEGA International, on various standardization efforts to deliver a solid foundation to process modeling. These efforts have included ebXML, the BPMN project at BPMI, and lately, the Process Modeling initiative at the OMG. In this response, I will try to position recent comments with regard to the status of the latest specifications.

BPMN Serialization and Status of OMG Activities on BPMN

Comment: "BPMN lacks a standard XML storage and interchange format and a specification for minimal compliance. These missing items seem to be so fundamental. How has BPMN become an important standard with these deficiencies?"

In business modeling languages, notation often comes before interchange. There was no interchange format for UML when it was widely adopted. The whole idea is indeed, that pictures are worth a thousand words. That's why BPMN has succeeded. This doesn't mean this is enough for long-term success. A notation must come with a consistent set of concepts and definitions. The interchange format simply comes from these conceptual definitions, not the reverse. This is why the OMG had set up the BPDm project to provide a consistent metamodel to the BPMN notation. This is now done and everything is now packaged under the same brand name of BPMN (Business Process Model and Notation).

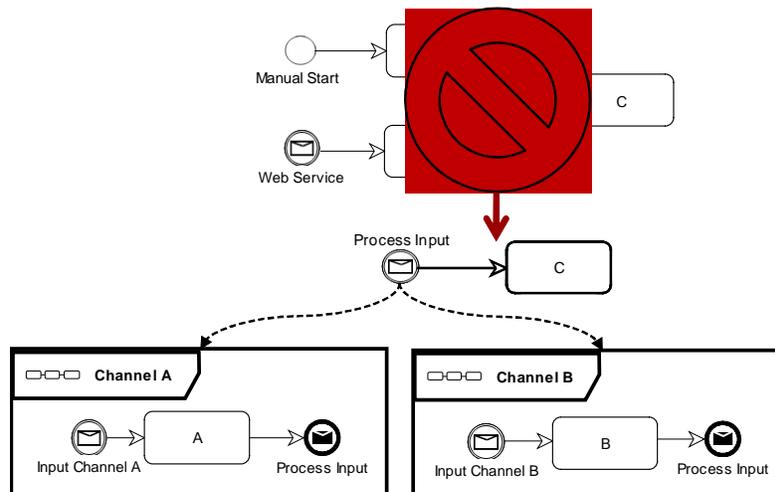
Comment: "OMG spends a long time on big picture issues, but fails to deliver detailed improvements."

The OMG has a consistent, prudent project approach to provide both a notation and a metamodel to BPMN. An important milestone was voted recently that also delivers the XML serialization format.

Multiple Start

Comment: "While the process can be started manually from a user desktop or automatically through a Web service, the process downstream is the same."

This issue is a real challenge. However, I'm not sure it relies on a "multiple starts" facility. The OMG BPMN specification allows for it, but actually the problem raised by this example lies in the ability to support multiple communication channels (see picture below). Activity "A" and "B" are not really part of the process described by this comment. They belong to other processes – channel processes – that each deal with different ways of conveying the input to the process.

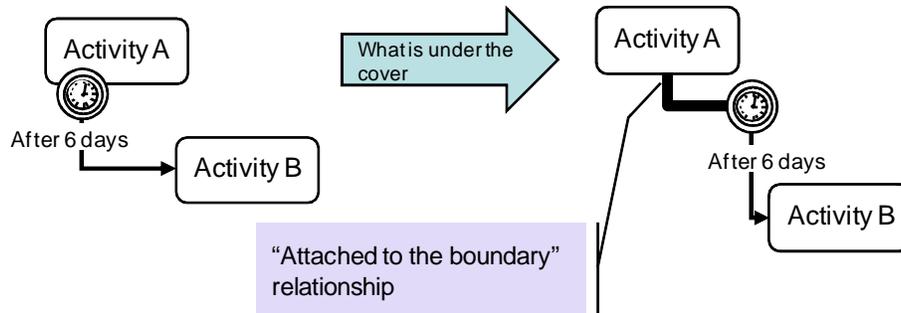


Good practice in process modeling is to separate the level of concerns: the communication channels should be separated from the work being done by the process. Thereby, it is possible to add new communication channels without having to change the process.

This is made possible in the OMG BPMN specification because Messages are considered as “communication steps”. As such, they can have their own behavior describing how the message is handled. This is common sense in our daily life. If I have some report review to handle, my reviewing process will be the same whether I receive the report through standard mail or through email. I may have other things to do for handling mails and emails. But this is not part of the reviewing process itself.

Non-Aborting Intermediate Events

Some may have this wish of “Non Aborting Intermediate Event”. This kind of feature is already supported in the OMG BPM specification. What he calls “attached to the boundary event” is in fact a special kind of relationship between Activities and Events (see figure below).



This relationship specifies how the life cycle of the event and the activity are related to one another. The default behavior is the following:

1. When the activity starts, the timer starts. Hence, “after six days” means “six days after the start of activity “A”.
2. When the activity ends, the timer is aborted, or when the timer ends, this activity is aborted.

It is a kind of “race course”. The first one that ends is the winner.

The good thing with the OMG BPMN specification is that new kinds of behavior can be defined for this “attached to the boundary” relationship. An example of new behavior can be exactly the one described.

1. When the activity starts, the timer starts.
2. .. and no additional rules regarding the abort of the activity or of the timer is added

This is made possible because the OMG BPMN specification is underpinned with a consistent and extensible “behavior model” that defines the rules for starting, ending, aborting, etc. The default behaviors are the ones most commonly used by process modelers (such as the race course). Therefore, process modelers don’t even have to think about them. But whenever required, this behavior model can be accessed and even extended. This is exactly how the “suspend” requirement suggested in this comment can be handled: by adding the “suspend/resume” life cycle events to the standard existing “start, end, abort”.

Semi-Structured Behavior

Comment: “It may be preferable to give the user performing activity A the power to start activity B from the middle of activity A, making B concurrent with A.”

This expresses the requirements to have a flexible way to specify the coordination of the life cycle of activities in a process. The usual “end-start” sequence flow is not enough. Again, this is entirely supported by the “behavior model” mentioned in the previous paragraph. This “behavior model” should actually be called “execution behavior model”, but for some terminology reasons, the term “execution” has led some people to think that we were dealing here with technical process automation issues. This is not the initial purpose, even if this is crucial for process automation.

The OMG BPMN "Execution Model" is what allows process modelers to specify a very large variety of concurrency behaviors as well as the basic end-start sequence flow. The U.S. National Institute of Standards and Technology has contributed within the OMG project team to set up the foundation of this execution model. It is based on a robust first order logic language called PSL (Process Specification Language) that can be used to assess the consistency of processes. The OMG Process Modeling project has leveraged this knowledge to make it available to average process modelers.

However, we are still in the education phases as it is sometimes challenging to explain both the simple and the rich cases. The BPMN wish list is a good sign that the need for a robust foundation for process modeling is real in the market.

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