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XML BUSINESS PROCESS LANGUAGES

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Most business managers have probably heard of XML, the new Internet protocol that allows software systems to package and pass information over the Internet. Many have probably read articles about how XML is going to facilitate extensive integration of business systems, both within and between companies. XML is one of the key components in the currently popular Web Services approach that IT vendors and consultants are talking about, and it will undoubtedly be used in most companies in the near future.

One of XML's great advantages over alternative approaches is its ability to support XML languages. In essence, once companies agree on vocabularies, they can use XML to pass information among themselves much more efficiently. The past few years have witnessed a whole host of groups proposing various XML languages. Some of the languages are designed to handle very technical aspects of communications while others are designed to handle communications relating to business issues. There are now XML languages being used to pass information between banks, between insurance companies, and between book publishers, for example.

One area that will be of special interest to readers of BPTrends is the development of XML business process languages. The idea is simple. It would be convenient if each company could describe its processes using a generic XML language. Then, when two or more companies wanted to work together, they could use XML to exchange information about the processes involved in their common effort. Indeed, with a little extra work, this exchange of process information could be automated.

Imagine that your company wants to work with a supplier. You want your supplier to provide new parts whenever your production process inventory drops below a given level. To do this, your supplier needs some way to monitor your production process. Your company also wants to initiate special orders under special circumstances. Using XML, each company can provide the other with descriptions of their processes so each can see how the two company's business processes interact to achieve these goals.

In a sense, an XML business process language is simply an Internet version of a workflow language. Indeed, one of the more active participants in the overall movement toward XML business process languages is the Workflow Management Coalition (WfMC) that set out early to establish an XML language that would let one workflow product send information about their workflow designs to other workflow products - the XML Process Description Language (XPDL). The WfMC is currently working on a revision of Wf-XML, an extension of SOAP, that would support long-running processes.

The group that initially attracted the most attention in the XML business process language arena is the Business Process Management Initiative (BPMI). BPMI is a consortium of companies that have joined together to promote a standard approach to using XML to model business processes. BPMI was formed in August of 2000 by a group of 16 enterprise software vendors and consulting firms. BPMI's membership grew rapidly as companies became aware of its efforts to create an open XML business process standard.

From the beginning, two companies played key roles. Intalio provided the software engineer, Assaf Arkin, who created the design for the language (BPML) that the group planned to develop. At the same time, Computer Science Corp.'s Howard Smith used his considerable skills as a writer to communicate the vision of BPMI.

The group worked throughout 2001 and most of 2002 to create the first version of the BPML. They also began work on a common graphical notation - BPMN - that could be used to diagram BPML applications. During this period they had a little over one hundred members.

The BPMI also worked on a common Web Services choreography standard, WSCI, and they are making an effort to position their notation as a generic standard that can be implemented by BPML, BPEL or XPDL.

While BPMI was working on their XML language (BPML) and notation (BPMN), IBM was working on its own business process workflow language, WSFL (Web Services Flow Language). Simultaneously, Microsoft was working on another alternative, XLANG. In August of 2002, however, just as BPMI was about to announce that BPML was ready for release, IBM, Microsoft and BEA announced that they had joined together to create a common XML business process language standard, BPEL4WS (Business Process Execution Language for Web Services). Most folks simply refer to the IBM- Microsoft-BEA offering as BPEL. The IBM-Microsoft-BEA announcement largely overshadowed the BPMI release, and BPMI membership began to drop off as software vendors decided that the IBM-Microsoft-BEA offering would probably become the recognized standard.

During this same period, however, two interesting new members became active in BPMI - SAP and IDS Scheer. IDS Scheer has contracted with Intalio to use its implementation of their BPML interpreter (engine) in their products. (Popkin Software has also contracted with Intalio to use its BPML engine and is preparing an update to System Architect that will support BPML.) With major support from these organizations, BPML may well play a role in future SAP packaged application architectures. In the meantime, BPML will definitely play a role in the exploratory applications of companies that want to investigate the potential of XML as a business process language.

IBM, Microsoft and BEA haven't done a very good job of coordinating their BPEL effort to date. They announced early on, for example, that they would be submitting BPEL to a standards body, but have yet to

decide which body. IBM and BEA have announced that they would like BPEL to be royalty-free and Microsoft has yet to commit to this. Presumably, work is going on behind the scenes, but unlike BPMI, that is an open consortium, the three companies have been less open. In spite of all this initial confusion, it seems likely that BPEL will eventually emerge as the *de facto* business process XML language.

One important thing to remember is that no company is going to make extensive use of an XML business process language in the next couple of years. This is new technology and large companies are just beginning to explore its uses. XML business process languages won't come into widespread use until after companies have embraced Web Services, and that transition is probably going to take at least another five years.

Companies are going to place more emphasis on business process change and on interfacing with customers and business partners via the Internet, over the next few years. To do this, they are going to need more powerful and flexible ways of describing processes and communicating information about them. XML business process languages will undoubtedly play a large role in this effort.

The BPMI organization, often working with the Workflow Management Coalition, has made a very positive contribution to the development of Web Services. They have educated lots of organizations about the possible uses of XML business process languages. In addition to the many appearances at conferences undertaken by BPMI board members, Howard Smith of CSC has joined with Peter Finger to write a new book on the potential of XML business process approaches. We will feature a review of Smith and Finger's book, *Business Process Management: The Third Wave*, on the BPTrends portal in April.

Till next time,

Paul Harmon