



Business Process Modeling Standards

Arun Varadarajan



SAP NETWORK

BUSINESS PROCESS EXPERT COMMUNITY

Making Business Process Innovation Happen

Recap

Who is a BPX

Where does a BPX fit into a project

What is expected of a BPX

BPX – Are we there ?

BPX – role of an enterprise architect

How to go about modeling business processes

BPX in the world of a service oriented architecture



BPM Standards

- Overview
- BPEL
- BPMN and BPML
- WFMC
- WS-CDL
- Other BPM models



Need for Standards

- There needs to be a clear cut specification that shall be used for the service to be consumed across applications and to be truly usable by all
- Multiple platforms and localized requirements give rise to incompatible and inward looking applications
- Need to utilize the web service platform provided to the fullest thereby extracting full use of the functionalities provided.



Evolution

- Initially Web Services propounded by IBM
- Competing specifications proposed by almost all vendors leading to a lot of confusion
- Extremely crowded market resulting in almost similar offerings
- Major vendors like IBM , Microsoft , BEA etc come together to develop a unified specification
- Formation of the OASIS group to administer the BPEL specification



Business Process Execution Language (BPEL)

- A language for the definition and execution of business processes
- Initially developed by Microsoft , IBM and BEA and now managed by the OASIS Organization for Standardization
- Mixture of the Petri-net and pi-calculus schools of thoughts of Business Process Specifications



BPEL Process Definition

Consists of two type of files :

Web Service Definition Language (WSDL) file –
containing the interface details of the web service
with other systems

BPEL files – which have the XML encoded process
definition

The source code will always be a combination of the
above – 1 BPEL file for the process and a number of
WSDL files depending on the number of web service
interfaces desired



BPMI standards – BPML and BPMN

BPMN : - A graphical flowchart language that can be used to represent a business process in an intuitive visual form

BPML : - An XML language that encodes the flow of a business process in a form that can be recognized by a process execution engine.

Other Standards – Business Process Query Language
– BPQL , Business Process Semantic model ,
Business Process Extension Layers



BPMN

- Consists of visual interpretations of process consisting of Business Process Diagrams
- The Diagram conveys in a flowchart manner what BPML and BPEL encode in XML
- Similar to a normal flowchart except that there are different notations for process Objects. The outcome – the diagram can be converted into BPEL or BPML XML specification code.
- There exists a standard mapping between BPEL and BPMN to interpret BPMN diagrams into BPEL specification code.

Reference : Stephen White – Introduction to BPMN –
www.bpmn.org/documents/Introduction%20to%20BPMN.pdf



Workflow Management Coalition (WfMC)

- Developed and standardized over a period of 10 years or so
- Consists of standards developed where the services are encoded using XPD L
- Has lost some of its relevancy in the big picture of web services and BPEL
- Uses the WAPI to connect to client applications – specifications are provided in CORBA , C# and COM.
- Uses the WfXML specifications for the connecting to other systems



WfMC specifications

- WfXML can be used to good effect for general remote process administration
- XPDL is a competitor to the more widely popular BPEL and WfMC is not widely used
- However being the incumbent specification and that it has been successfully implemented in many places and its contributor base in terms of members to the coalition is much higher than BPEL.



World Wide Web Choreography (W3C)

Developed in 1994 and the group has also authored the web and enterprise computing specifications pertaining to HTML and XML.

Major contributions include SOAP and Web Services Definition Language (WSDL)

W3C assumes significance as one of the founders of BPM with regard to the above specifications.



W3C summary

- Involves a completely different thought process – The internal process of the different functions is immaterial – what matters is that there is middleware that will translate the data between systems and help in choreographing or orchestrating the whole process.
- The process is seen as a set of black boxes who are linked together by middleware.



Other BPM Models

- Microsoft's XLANG – Some of the best ideas of XLANG went into BPEL specifications
- Process Definition and runtime interface models developed by the Object Management Group
- IBM Web Services Flow Language- no longer in use but the best ideas were transferred into BPEL specifications



What should a BPX know about standards ?

XML ? Should a BPX code in XML ?

Knowledge about BPMN to model the process visually

Knowledge about the system landscape to be able to look at the process from a system centric view , business centric view and define the way forward

To be able to demonstrate a value proposition to be able to improve the process and its use across systems and the future landscape proposed



References

- Essential Business Process Modeling – Michael Havey – O’Reilly – 2005
- V.Portougal, D.Sundaram - Business Processes - Operational Solutions for SAP Implementation – IRM Press (December 22, 2005)
- Business Process Expert Community – bpx.sdn.com



Thank You

Q&A

