BPMN 2.0 Specification



This Infographics illustrates the content and the main structure of 508 pages long OMG's BPMN 2.0 specification, which is available on http://www.omg.org/spec/BPMN/2.0.

Scope

The primary goal of BPMN



The primary goal of BPMN is to provide a notation that is readily understandable by all business users, from the business analysts that create the initial drafts of the processes, to the technical developers responsible for implementing the technology that will perform those processes, and finally, to the business people who will manage and monitor those processes. Thus, BPMN creates a standardized bridge for the gap between the business process design and process implementation.

with BPMN 2.0 if and only if the software fully matches the applicable compliance points as stated in this section.

> Analytical subclass Descriptive subclass

Software can claim compliance or conformance



Normative references

Conformance

Choreography Modeling Conformance

Process Modeling Conformance Process Execution Conformance BPEL Process Execution Conformance

Normative

Non-normative

Normative RFC-2119: Request for comments Precisely defines the meaning of the following keywords "MUST",

Full class

"MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL".

Terms and Definitions

NON- Activity Service, BPEL4People, Business Process Normative Definition Metamodel, Business Process Modeling, Business Transaction Protocol, Dublin Core Meta Data, ebXML BPSS, OMG UML, Open Nested Transactions, RDF, SOAP 1.2, UDDI; URI, WfMC Glossary, Web Services Transaction, Workflow Patterns, WSBPEL, WS-Coordination, WSDL, WS-HumanTask, XML 1.0, XML Namespace, XML-Schema, Xpath, XPDL.

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Symbols

Additional Information

Conventions

Structure of this document

The section introduces the conventions used in this document. This includes (text) notational conventions and notations for schema components. Also included are designated namespace definitions.

There are no symbols defined in this

specification.

Acknowledgements Submitting organizations, supporting organizations, finalization task force voting members, and special

acknowledgements to persons of the core teams.

BPMN Scope BPMN Elements

Overview

BPMN Diagram Types Use of Text, Color, Size, and Lines in a Flow Object Connection Rules **BPMN Extensibility**

summary of the elements introduced in subsequent sections of the document. Categories of (visual) BPMN elements

This section discusses the scope of the specification and provides a



BPMN Core Structure

Foundation **Common Elements** Services

Infrastructure

BPMN Example

basic BPMN elements needed for constructing various business processes, including collaborations, orchestration processes and choreographies.

BPMN core that includes



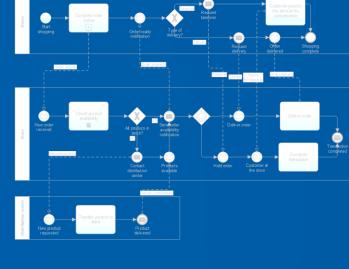
Collaboration

Basic Collaboration Concepts

Pool and Participant

Message Flow Conversations **Process within Collaboration** Choreography within Collaboration Collaboration Package XML Schemas for modeling collaborations - a collection of participants shown as pools, their interactions as shown by message flows, and may include processes within the pools and/or choreographies between the pools.

This section contains classes that are used



Process Basic Process Concepts

Activities Items and Data Events Gateways Compensation Lanes

Process Instances, Unmodeled Activities, and Public Processes **Auditing** Monitoring Process Package XML Schemas

Choreography

any level from enterprise-wide processes to processes performed by a single person. Low-level processes can be grouped together to achieve a common business goal.

This section contains classes that are used for modeling processes, which describe a sequence or flow of activities in an organization

with the objective of carrying out work. Processes can be defined at

Use of BPMN Common Elements

Choreography Activities Events

Basic Choreography Concepts

Gateways Choreography within Collaboration XML Schema for Choreography

not on orchestrations of the work performed within these participants, but rather on the exchange of information (messages) between these participants.

This section defines Choreography diagrams, which formalize the way business participants coordinate their interactions. The focus is

Notation and Diagrams BPMN Diagram Interchange (BPMN DI) BPMN Diagram Interchange (DI) Meta-

Notational Depiction Library and Abstract **Element Resolutions** Examples

BPMN Execution Semantics

interchange (BPMN DI). The BPMN DI is meant to facilitate interchange of BPMN diagrams between tools rather than being used for internal diagram representation by the tools. This section defines the execution semantics for orchestrations in

BPMN 2.0. The purpose of this

execution semantics is to describe a clear and precise understanding of

This section specifies the meta-model

and schema for BPMN 2.0 diagram



Activities Gateways **Events**

Process Instantiation and Termination

Mapping BPMN Models to

WS-BPEL

the operation of executable BPMN elements.

This section covers a mapping of a BPMN model to

WS-BPEL that is derived by analyzing the BPMN objects and the relationships between these objects.

WS-BPEL provides a language partnerLink="[Q, Task-operation-interface portType="[Task-operation-interface]" for the specification of executable and abstract business processes.

Extended BPMN-BPEL Mapping

Basic BPMN-BPEL Mapping

Exchange Formats Interchanging Incomplete Models

XMI XSLT Transformation between XSD and XMI

XSD

Machine Readable Files

where one user first defines a high-level model, and then passes it on to another user to be completed and refined. Such "incomplete" models are ones in which all of the mandatory attributes have not yet been filled in, or the cardinality lower bound of attributes and associations has not been satisfied.

In practice, it is common for models to be interchanged before they are complete. This occurs frequently when doing iterative modeling,

The major notational changes include: - the addition of a choreography diagram - the addition of a conversation diagram

XMI allows for the interchange of such incomplete models.

Changes from BPMN 1.2

Major notational changes Major technical changes

- event sub-processes for a process

The major technical changes include: - a formal meta-model as shown through the class diagrams - interchange formats for abstract syntax model interchange - interchange formats for diagram interchange

- non-interrupting events for a process

- XSLT transformations between the XMI and XSD formats

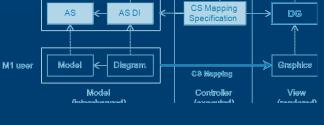
Diagram Interchange Scope

Architecture

Diagram Common

Diagram Interchange

This annex provides documentation for a relevant subset of an alpha version of a Diagram Definition (DD) specification. The Diagram Definition specification provides a basis for modeling and interchanging graphical notations, specifically node and edge style diagrams as found in BPMN, UML and SysML, for example, where the notations are tied to abstract



Glossary

language syntaxes defined with MOF.

This annex defines the most common terms, used in the specification. A defined set of business activities that represent the steps required to achieve a business objective. It includes the flow and use of information and resources. The services and tools that support process management (for example, process analysis, definition, processing, monitoring and administration), including sup analysis, definition, processing, monitoring and administration), including su for human and application-level interaction. BPM tools can eliminate manual processes and automate the routing of requests between departments and