0 Submission Material

0.1 Submission Preface

This clause contains information specific to the OMG submission process and is not part of the proposed specification. The proposed specification starts with Clause 1. All clauses are normative unless explicitly marked as informative.

The design rationale for the submission is presented in Clause 1.

0.2 Submission Team

0.2.1 Submitters

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0.3 Resolution of Requirements

0.3.1   Mandatory Requirements

Requirement	Resolution
6.5.1 UML Profile for BPMN v2.0 Processes	
Submissions shall define a UML profile for BPMN that covers the Process Modeling and Process Execution conformance types, including the Descriptive, Analytic, and Common Executable conformance sub-classes. The defined profile shall:	This is addressed starting in Clause 1.
1) use the semantics defined in BPMN 2,	The submission uses BPMN 2 semantics as the target of the mapping required in the next item.
2) provide a mapping between BPMN 2 semantics and the profiled UML semantics	The submission uses UML stereotypes to extend UML model elements that have semantics equivalent to the BPMN 2 model elements corresponding to the stereotypes, or extends UML model elements with additional semantics to achieve this equivalence. Equivalent semantics ensures businesses following BPMN process or collaboration diagrams will function the same way whether the diagrams are captured using the BPMN metamodel or the profiled UML metamodel, see Clause 1.
6.5.2 XSLT transformation between UML and BPMN process models.	
Submissions shall define an XSLT transform that transforms an instance of the BPMN v2.0 XSD to an XMI document that conforms to the UML Profile for BPMN v2.0, and shall also define the inverse XSLT transformation.	These are provided in machine-readable files.
6.5.3 QVT transformation between UML and BPMN process models.	
Submissions shall define a QVT transformation where the source is BPMN v 2.0 and the target is the UML Profile for BPMN 2, and shall also define the inverse QVT transformation.	These are provided in machine-readable files.
6.5.4 Submissions shall ensure that the XSLT and QVT transformations are consistent with each other, and with the profile.	The XSLT and QVT transformations are based on the same mappings between BPMN models and UML models with the profile applied, as expressed in stereotypes, properties and associations between stereotypes, and natural language descriptions of these in this specification.
6.5.5 Integration into the rest of UML. For the portions of the UML metamodel that the profile is based on, submissions shall explain how the profile affects the use of those portions with the rest of UML.	The profile does not modify the semantics of extended UML model elements, so does not affect the use of the rest of UML.

0.3.2   Optional Requirements

Requirement	Resolution
6.6.1 UPDM - UML profile for BPMN. A UPDM-BPMN mapping table is defined in UPDM v 2.0. The proposed profile may be consistent with this mapping table.	UPDM 2.0 does not contain a UPDM-BPMN mapping table.

0.3.3   Resolution of Discussion Items

Discussion Item	Resolution
6.7.1 Loss of information in transformations. Submissions shall discuss whether the transformations that they define result in loss of information and if so, the profile shall document that loss of information precisely and discuss how this loss of information can be managed.	Abstract syntax is not lost in the transformation.
6.7.2 Semantics. Submissions shall discuss where UML users might expect a different semantics from BPMN process diagrams than similar diagrams in UML, and how that difference can be managed.	Any differences between the semantics of UML model elements and the semantics of BPMN is described for each extension, with guidelines on how to manage it.
6.7.3 Traceability from BPMN to UPDM 2.0 terminology. Submissions shall discuss whether the profile that they define results in deviation from the UPDM-BPMN mapping table defined in UPDM v 2.0. If so, the profile shall document that deviation precisely and discuss how this deviation can be mitigated.	UPDM 2.0 does not contain a UPDM-BPMN mapping table.
6.7.4 Traceability from BPMN process to SoaML terminology. Submissions shall discuss whether the profile that they define affects the relationship of BPMN and SoaML. If so, the profile shall document the effect precisely and discuss how negative effects can be mitigated.	There is no standard relationship between BPMN and SoaML to use as the basis for discussion. In addition, the submission does not change BPMN or UML (on which soaML is based), so has no effect on the relationship between BPMN and SoaML.

0.4 Evaluation Criteria

Criterion	Comment
Completeness and accuracy of the mapping between BPMN 2 semantics and the profiled UML semantics.	Every stereotype gives a UML-based semantics equivalent to the corresponding BPMN element.
The extent to which the UML profile enables models that use the profile to be visualized with BPMN process notation.	The profile supports the concepts of BPMN processes needed to use BPMN process notation.
The extent to which the transformations preserve information.	See discussion item 6.7.1.
Clarity of the proposed specification for ease of reviewing its correctness and the purpose of implementing conforming modeling tools as discussed in sections 4.9.2, 5.1.4, and 5.2.4.	BPMN and UML concepts are summarized and compared to facilitate understanding how the profile extends UML models to provide semantics equivalent to BPMN's. BPMN and UML provide more detailed explanations of their concepts as needed to use and implement the profile.
Ability to be reused within other profiles such as UPDM. Discuss the level of integration/linking between this and other UML extension profiles, such as UPDM, SoaML, SysML.	The profile does not modify the semantics of extended UML model elements, so has no effect on other UML extension profiles.
If optional requirement 6.6.1 has been addressed, the extent to which the proposed profile is consistent with a UML-BPMN mapping table defined in UPDM v 2.0.	See response to requirement 6.6.1.
The degree to which other OMG standards are used as the basis of the specification.	The submission uses other OMG standards relevant to the topic (BPMN, UML, and QVT).

0.5 Proof of Concept

The submitters of this specification have extensive experience in building graphic intensive software tools. Some have experience implementing earlier commercial UML profiles for BPMN, as well as internal prototypes of this specification. They are confident that the specification can be implemented.

0.6 Changes to Adopted OMG Specifications

This specification proposes no changes to adopted OMG specifications.