

Object Management Group

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Dynamic Business Activity Modeling

Request For Information

OMG Document: bmi/2008-03-03

Responses due: *September 1, 2008*

1.0 Introduction

1.1 The Object Management Group (OMG)

With well-established standards covering software from design and development, through deployment and maintenance, and extending to evolution to future platforms, the Object Management Group (OMG) supports a full-lifecycle approach to enterprise integration which maximizes ROI, the key to successful IT. OMG's Modeling standards, the basis for the MDA, include the Unified Modeling Language (UML) and Common Warehouse Metamodel (CWM). CORBA, the Common Object Request Broker Architecture, is OMG's standard open platform with hundreds of millions of deployments running today. Headquartered in Needham, MA, USA, the Object Management Group is an international, open membership, not-for-profit computer industry specifications consortium. More information about OMG can be found at www.omg.org.

1.2 Business Modeling and Integration Task Force (BMIDTF)

The Business Modeling & Integration Domain Task Force develops specifications for models and modeling technologies that support management of an enterprise. These specifications promote integration and collaboration of people, systems, processes, and information across the enterprise, including business partners and customers.

Main areas of interest for the task force are

- Business modeling
- Business planning and motivation modeling
- Business Process Management,
- Business rules
- Business language and vocabulary

This RFI is intended to further enhance OMG support for Business Process Management, by examining models of business activities that are not primarily regular process flows.

1.3 RFI Objectives

1.3.1 What is an OMG RFI?

The intent of an OMG Request for Information (RFI) is to gather information for the purpose of guiding a subgroup in its efforts to provide specifications for solutions to industry problems. The RFI process is used by a subgroup to canvass a targeted industry segment for one or more of the following purposes:

- Acquiring general or specific information about industry requirements.

- Soliciting assistance in identifying potential technology sources and approaches to solution.
- Soliciting input to validate a subgroup's roadmap.

Generally speaking, the RFI process assists an OMG Task Force in determining what standards development activities it should undertake and the scope and sequencing of those activities. The object of an RFI is to assess the utility of a standard in the market and the readiness of the solution technologies for standardization.

2.0 Information Being Requested

2.1 Summary of this RFI

An important part of the management of an organization is having a clear understanding of how the organization works, how it actually accomplishes its objectives. At every level of management, it is necessary to instruct new employees in the behaviors of the organizational processes in which they will be involved, and to modify those processes to reduce friction and accommodate new and modified business objectives for the unit. The term “Business Process Management” is now commonly used to refer to the activities associated with managing organizational processes: understanding them, documenting them, evaluating them, measuring performance, modifying them and replacing them.

In the Business Process Management literature, most of the attention has been on modeling, measuring and improving the most commonly repeated processes of the organization. And for the most part these processes are nearly sequential flows of activities, with occasional decision points, repetitions and recoveries. OMG has recently published a specification for modeling business processes of this kind – the Business Process Modeling Notation – and this specification is widely implemented by business process documentation and automation tools. In addition, OMG has recently published a metamodel and a standard exchange form for the exchange of business process modeling concepts – the Business Process Definition Metamodel.

Many modern business processes, however, are not readily modeled as predictable flows of clearly defined subactivities. Some such processes are entirely driven by observing and responding to events that occur within the business or within the business environment. In retail sales, for example, this is the most common behavior of interface with customers. Other processes involve ad hoc process definitions – dynamic development of a sequence (or a more general graph) of well-defined subactivities that will meet a particular need. The “call center” is a common example of this kind. In still other cases, the business process and some of its subactivities may be synthesized on the spot step-by-step in response to an evolving situation. This is the model used by fire chiefs organizing their resources to fight a major fire.

In most of these cases, some part of the process is dynamically developed by applying a set of templates, rules and policies. The purpose of this RFI is to determine

- whether it is appropriate to develop standards at this time for modeling and measurement technologies that apply to these dynamically developed processes; and
- what the scope of such a standards activity (or activities) should be.

2.2 Detail

2.2.1 Behavior Modeling Technologies

This RFI solicits information about modeling approaches for processes and behaviors that are “dynamically determined”:

- adaptive processes
- event-driven processes
- ad hoc processes
- ad hoc variants on nominal reference processes
- runtime process composition and specification
- “dynamic planning”, as used in artificial intelligence and agent systems
- negotiated joint processes and collaborations

It includes such approaches as:

- process assembly from pre-defined unit activities
- case file management
- rule-based process definition
- template-based process definition
- Role-Activity Diagrams™
- social networking

The above should be considered indicative of the domain of the RFI, but by no means comprehensive. The concern is to identify kinds of processes that are not well-served by BPMN or UML Activity Models and the technologies that support their specification and measurement.

2.2.2 Requirements

This RFI solicits examples of business domains in which such “dynamically determined” processes are common. Experts in those domains are encouraged to provide information regarding the common concerns and forms of processes in those domains, their relationships to the domain entities, and their specific requirements for modeling and measurement capabilities.

2.2.3 Tooling

This RFI solicits examples of software tools and published methodologies for defining and managing dynamically determined business processes. Persons and organizations having such tools and publications are encouraged to provide information regarding the kinds of process definition problems they are intended to solve, and the corresponding approaches they use and the capabilities they provide.

This objective should not be seen as a marketing opportunity, but rather as a presentation indicative of the state-of-the-art. The Task Force needs to understand what features are common among available tools, as a guide to what modeling and measurement concepts might reasonably be standardized.

2.2.4 Interoperability

What is the nature of the interoperability requirements that would motivate one or more standards? Why should OMG develop a standard, and what kind of standard?

Is there a need for capturing dynamic process models and their supporting components in some standard exchange form so that they can be exchanged among software tools? For example, would an organization typically develop the “model” (template, rule base, etc.) in one tool and communicate it another software tool for execution, in-process oversight, or performance analysis? Would it be necessary to communicate dynamic models and their components with equivalent tools during negotiations with business partners? Are there examples of such tools? Are there common business situations in which this would occur?

Alternatively, is there a need for capturing dynamic process models and their supporting components in some standard visual and/or textual form that is easily understood by human agents? For example, is it helpful for agents of the organization to be able to interact with multiple tools using a common presentation form? Is it helpful to industry generally to establish a common presentation form so that instructional materials can be developed to teach business users the methods and approaches, whilst permitting them to choose different software tools that best support their usage needs?

3.0 Instructions for Responding to this RFI

3.1 Who May Respond

Responses from *anyone* in industry, government or academia with practical knowledge of dynamic process definition (of any form) are welcome.

When and if OMG issues a subsequent Request for Proposals (RFP) in this area, OMG members at the appropriate membership level will be eligible to respond with detailed specifications. OMG is an open membership organization. Any company, university or organization is welcome to join and participate. For information, consult <http://www.omg.org/membership>.

3.2 How to Respond

One electronic copy in machine-readable format (typically ASCII, MS Word, or WordPerfect format) should be sent to ***omg-documents@omg.org***. One confirming paper copy of all documents should be sent to the OMG postal address below.

Object Management Group, Inc.
140 Kendrick Street
Building A Suite 300
Needham, MA 02494
USA
Attn: Dynamic Business Activity Modeling RFI

Responses to this RFI must be received at OMG no later than 5:00 PM US Eastern Time (22:00 GMT) September 1, 2008.

Other communication regarding this RFI should be sent to the contacts listed in paragraph 3.8.

3.3 RFI Response Contact

Companies responding to this RFI shall designate a single contact within that company for receipt of all subsequent information regarding this RFI and the forthcoming series of RFPs. The name of this contact will be made available to all OMG members.

3.4 Format of RFI Responses

The following outline is offered to assist in the development of your response. You should include:

- A cover letter -- the cover letter should include a brief summary of your response, such as indicating to which areas you are responding and must also indicate if supporting documentation is included in your response.
- The response itself, covering any or all of the areas of information requested by this RFI.
- If required, a glossary that maps terminology used in your response to OMG standard terminology. (See OMG specifications [CORBA, UML, MOF, XMI] and a description of OMG's Model Driven Architecture [MDA] for OMG's standard terminology.)

Although the OMG does not limit the size of responses, you are asked to consider that the OMG will rely upon volunteer resources with limited time availability to review these responses. In order to assure that your response receives the attention it deserves, you are asked to consider limiting the size of your response (not counting any supporting documentation) to approximately 25 pages. If you consider supporting documentation to be necessary, please indicate which portions of the supporting documentation are relevant to this RFI.

3.5 Distribution of RFI Responses

Copies of all documentation submitted in response to this RFI will be available to all OMG members for review purposes.

3.6 Copyrighted Material

According to OMG Policies and Procedures, proprietary and confidential material shall not be included in any response to the OMG. Any material received is treated as a public document. If copyrighted material is sent in response to this RFI then a statement waiving that copyright for use by the OMG is required and a limited waiver of copyright that allows OMG members to make up to twenty-five (25) copies for review purposes is required. Consult Appendix B for a template for this copyright waiver.

3.7 Reimbursement

The OMG will not reimburse submitters for any costs in conjunction with their responses to this RFI.

3.8 Questions Regarding this RFI

Any technical questions regarding this RFI should be sent to:

Edward J. Barkmeyer
National Institute of Standards & Technology
Phone: +1 301-975-3528
Email: edbark@nist.gov

Questions regarding the response process should be forwarded to:

Object Management Group, Inc.
140 Kendrick Street
Building A Suite 300
Needham, MA 02494
USA
Attn: Mr. Juergen Boldt, Director of Member Services

Phone: +1-781-444 0404

Fax: +1-781-444 0320
Email: juergen@omg.org

4.0 Response Review Process and Schedule

4.1 Review Process

OMG RFIs are issued with the intent to survey industry to obtain information that provides guidance, which will be used in the preparation of RFPs. The OMG membership, specifically the Business Modeling and Integration Task Force, will review responses to this RFI. Based on those responses, the BMIDTF will augment its roadmap and prepare one or more RFPs.

4.2 Clarification

To fully comprehend the information contained within a response to this RFI, the reviewing group may seek further clarification on that response. This clarification may be requested in the form of brief verbal communication by telephone; written communication; electronic communication; or a presentation of the response to a meeting of the BMIDTF.

4.3 RFI Response Presentations and Demonstrations

RFI Respondents may be invited to present their response to the BMIDTF. The purpose of this presentation would be to seek clarification of information contained within the response (as noted above); to acquaint the respondents with each other and their ideas; to further explore issues raised in open forum; and to further meet the goals of the RFI.

In addition, a technology demonstration to the BMIDTF may prove useful to support the RFI response. If desired, please coordinate with the Contact cited in paragraph 3.8.

4.4 Schedule

The schedule for responding to this RFI is as follows. Please note that early responses are encouraged.

RFI issued:	March 15, 2008
RFI responses due:	September 1, 2008
Review of RFI responses:	September 22-23, 2008 (OMG Meeting in Orlando, Florida)

Appendix A References and Glossary Specific to this RFI

A.1 References Specific to this RFI

[BPMN] Business Process Modeling Notation, v1.1

<http://www.omg.org/technology/documents/formal/bpmn.htm>.

[BPDM] Business Process Definition Metamodel, v1.0

<http://www.omg.org/technology/documents/formal/bpdm.htm>.

[MDA] MDA Technical Perspective, <http://doc.omg.org/ab/2001-02-01>.

[MOF] Meta-Object Facility (MOF),

<http://www.omg.org/technology/documents/formal/mof.htm>.

[UML] Unified Modeling Language (UML),

http://www.omg.org/technology/documents/formal/unified_modeling_language.htm.

[XMI] XML Metadata Interchange (XMI),

http://www.omg.org/technology/documents/formal/xml_metadata_interchange.htm.

A.2 Glossary Specific to this RFI

none.

Appendix B Template for Copyright Waiver for RFI Responses

[Date]

Object Management Group, Inc.
140 Kendrick Street
Building A Suite 300
Needham, MA 02494
Attn: James Nemiah, General Counsel

Fax: 781-444-0320

Dear Mr. Nemiah:

This letter constitutes a limited license to use certain materials copyrighted by the undersigned. We understand that the Object Management Group, Inc. (“OMG”) is a not-for-profit consortium that produces and maintains computer industry specifications for interoperable enterprise applications.

We understand that the Copyrighted Material identified below is being submitted to OMG as part of a response to the identified Request for Information (RFI), for use in connection with an OMG process that may result in the adoption of an OMG specification.

Source of Copyrighted
Material:

Copyrighted Material to be
submitted to OMG:

Submitter(s):

RFI Doc.-Title & No.

We hereby grant OMG the right to make an unlimited number of copies of the Copyrighted Material as part of the OMG adoption process.

We hereby grant each OMG member the limited right to make up to twenty-five (25) copies of the Copyrighted Material for review purposes only as part of the OMG adoption process.

Regards,