

# THE OMG STANDARD

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## Trip Report: Athens, Greece

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Vice President, Technology Transfer

OMG members met in Athens, Greece, during the week of April 11-15, 2005. In between weekends spent walking around famous historic sites, members spent a busy week advancing dozens of standards efforts through our adoption process. In this article, we'll report on developments at the Athens meeting. Because OMG produces standards in modeling, middleware including distributed real-time and embedded systems, and domains such as manufacturing, life science research, healthcare, space technology, and more, there is

sure to be something here for everyone. Listing every process underway, this report necessarily trades breadth for depth – you won't find much detail about any new standard in particular, but will get a good idea of the scope of OMG activity.

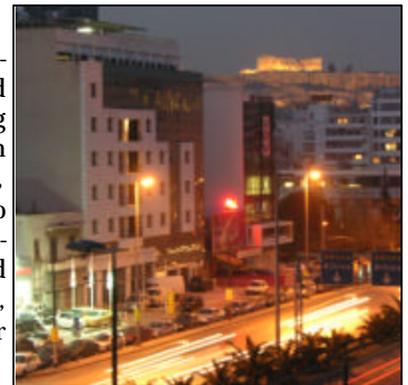
In our report, we'll refer to actions planned for the next meeting which will be held in Boston, Massachusetts, USA from June 20 to 24, 2005, and the following one to be held in Atlanta, Georgia, USA from September 12 to 16, 2005.

### Developments at the Athens Meeting

### Platform Task Forces and Special Interest Groups

- **Analysis and Design (AD) PTF**

The AD PTF voted to recommend issuance of an RFP for an Executable



The Acropolis from Marriott Athens Ledra

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## Robotics Domain Special Interest Group

Humans have been using tools to aid us in our daily lives for thousands of years; from basic pulley systems to draw water from wells, to surgical robots that require smaller incisions. We have created machines to

do work that is either too dangerous, or too costly for a person. With the explosion of robotics technology, machines are also being created to entertain and help around the house. Pet robots and automatic vacuum clean-

ers have joined ranks with manufacturing robots that speed the building of cars or robotic rovers that explore other planets.

The difference between a  
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UML Foundation. The RFP was endorsed by the Architecture Board on Thursday and issued by vote of the PTC on Friday morning. They reviewed revised submissions to the MOF 2.0 Facility and Object Lifecycle RFP and voted to extend the deadline and so receive and review further revised submissions at the Atlanta meeting this September.

- **Architecture Driven Modernization (ADM) PTF**

The ADM PTF is currently working on two new specifications: a Knowledge Discovery Metamodel (KDM) to represent software systems, and an Abstract Syntax Tree Metamodel (ASTM) that can represent low-level source language elements and constructs. In Athens, they reviewed a revised submission to the KDM RFP, and presented a tutorial covering their scope, plus the KDM and ASTM RFPs.

- **Middleware and Related Services (MARS) PTF**

The MARS PTF recommended issuance of an RFP for a UML Profile for CORBA and the CORBA Component Model (CCM). This RFP was endorsed by the Architecture Board

later in the week and issued by vote of the PTC on Friday morning. Members also reviewed five revised submissions and one initial submission to various RFPs. The revised submission defining Streams for CORBA Components was recommended for adoption; later in the week it passed its Architecture Board review and started its PTC recommendation vote. Deadlines for the other four were extended to allow for requested changes: Quality of Service (QoS) for the CORBA Component Model (CCM) was extended to the Boston meeting; the other three – UML Profile for Voice-

Based Applications, WSDL to C++ Mapping, and Load Distribution – were extended to Atlanta in September. Members reviewed the initial submission defining CORBA Bindings for WSDL; their comments will be reflected in revised submissions also to be reviewed in Atlanta.

- **Real-Time, Embedded, and Specialized Systems (RTESS) PTF**

The RTESS PTF reviewed and voted to recommend adoption of the High Performance Enablers submission, which was endorsed by the Architecture Board later in the week and proceeded to PTC vote on Friday. They also recommended a Request for Comments (RFC) for a UML Profile for a System-on-a-Chip. This is available for comments through May 25, 2005. For more information, send email to [info@omg.org](mailto:info@omg.org). Members saw presentations on RT middleware interoperability, MILS

(Multiple Independent Levels of Security) Protection Communication Service Architecture, and Approaches to Profiling. Finally, they updated the Real-time roadmap, accessible from their home page <http://realtime.omg.org>.

- **Telecom PSIG**

The Telecom PSIG flags adoption efforts in OMG's various task forces that have special interest for Telecom company members. In Athens, they attended sessions on the QoS for CCM, Streams for CCM, UML Profile for Voice-Based Applications, WSDL to C++ binding, and WSDL to CORBA mapping, and the newly issued UML Profile for CORBA and CCM.

## **Domain Task Forces and Special Interest Groups**

- **Business Enterprise Integration (BEI) DTF**

The BEI DTF reviewed a revised submission to the Business Semantics of Business Rules RFP, and decided to extend the deadline for a new revised submission to the Boston meeting to allow for further modifications.

- **C4I DTF**

The C4I DTF re-opened LOIs for the Alerts Management RFP until May 31, 2005, and extended the Initial Submission deadline to August 22, 2005.

- **Healthcare DTF**

The Healthcare DTF met the week before the Athens meeting in Salt Lake City, Utah, USA. (TFs are allowed to meet separately from the rest of the OMG, but the business they can transact at these meetings is limited. Typically these meetings are held in conjunction with industry conventions to spread awareness, or in regions with a concentration of participants as was the case here.) At this meeting, held jointly with OMG's Liaison partner Health Level 7 (HL7), members advanced the process of selecting services for standardization through a combination of HL7's and OMG's technology, architecture, and adoption processes.

- **Life Science Research (LSR) DTF**

The LSR DTF discussed their Single Nucleotide Polymorphisms specification, and plans to evaluate a revised submission to the Chemical Structure (CSAR) RFP in Boston.



OMG Staff and Members

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- **Manufacturing Technology and Industrial Systems (ManTIS) DTF**

The ManTIS DTF co-hosted the Enterprise Interoperability Information Day with the BEI DTF. They worked on the PLM Services V2.0 RFP, planned for issuance in Boston, and continued work on the KBE RFP as well as an RFP for a MOF 2-based mapping of EXPRESS to UML using QVT (Queries/Views/Transformations), an RFP currently underway in the AD PTF).



Arriving at the Chairs' Dinner

- **Software-Based Communications (SBC) DTF**

The SBC DTF reviewed the initial submission to the Digital IF RFP, and also reviewed a draft RFP for Secure Authentication. They extended initial submission deadlines for Smart Antenna, Key Management, and Security Subsystem Core to the Boston meeting.

- **Space DTF**

This was a big meeting for the Space DTF: The Consultative Committee for Space Data Systems (CCSDS; <http://www.ccsds.org>) is co-locating their standards-setting meetings with OMG and the Space DTF, and this was the first. Over 100 CCSDS members (many also members of OMG) combined with the Space DTF on Monday afternoon for a plenary Seminar on Space Standards, where each organization introduced the other to its work. Then, during the week, members of each organization participated in meetings of the other with the goal of coordinating standards-setting efforts and developing

new cooperative projects. Monitor and Control, originally the subject of SDTF RFP 2 (which did not attract any submissions), will instead be standardized in CCSDS with SDTF participation. The Operations Procedure Model will be standardized in OMG, with CCSDS members tracking progress closely. Finally, several CCSDS members (who are also OMG members) have joined the XTCE RTF and will participate in resolving the 97 RIDs that they submitted, as

well as any additional issues that come up before the deadline. Then CCSDS and OMG will adopt the resulting document in a synchronized effort. CCSDS' next meeting will take place in Atlanta with OMG during the week of September 12-16. SDTF completed drafting the RFP for the Operations Procedure Model and brought it before the Architecture Board twice, but did not get approval to issue. They will bring a revised version to Boston and hope to issue there.

- **Super Distributed Objects (SDO) DSIG**

The SDO DSIG works on distributed systems with many (relatively) small participants, anticipating development of ubiquitous networks of, e.g., appliances or industrial components. Recently, they've been working closely with the new Robotics DSIG (described next), and at this meeting they decided to work on an RFP for an SDO model applying to the Robotics Domain, and try to get it ready in time for review and issuance in Boston in June.

- **Robotics DSIG**

The Robotics DSIG prepared to

draft a Request for Information to survey the industry for suggestions and requirements for future robotics standards. They plan to issue the RFI at the Boston meeting.

### **Other Activities:**

#### **Refining the Definition of MDA**

The Object and Reference Model Subcommittee (ORMSC) voted to accept a draft foundation model that provides a more precise conceptual underpinning for the MDA guide. Members will review a polished draft at the upcoming Boston meeting. One key sentence: "Models in the context of the MDA Foundation Model are instances of MOF metamodels and therefore consist of model elements and links between them."

#### **Standards Supporting Regulatory Processes**

Members chartered the Regulatory Compliance DSIG with the goal of developing, codifying, and promoting standards supporting IT best practices for regulatory processes. At the formative meeting during the week, members heard presentations from Fair Isaac, ILOG, and IBM.

#### **Liaison Activities**

The Liaison Subcommittee reported that two PAS submissions (Publicly Available Specifications) to ISO, recently revised to take ballot comments into account, are expected to be approved at the SC32 meeting in Berlin, April 18-22, 2005. The Liaison SC also approved a Liaison Statement to SC32 on the ISO 24707 Common Logic Specification. ■

# Inside the OMG Process

## OMG's Technology Adoption Process

Every new OMG specification goes through many steps between concept and finalization. We only have room for a brief summary here; for more details and links to process documents, check out <http://www.omg.org/gettingstarted/processintro.htm>.

OMG members run the adoption process, following the steps prescribed in the group's Policies and Procedures document (<http://www.omg.org/cgi-bin/doc?pp>) which assures openness and fair decision-making based on a policy of one company/one vote. (OMG members are companies; not people. A company's membership allows every employee to access the OMG website and email lists, and attend meetings, but only one person from a company may vote in a particular decision or election even if more than one is present.)

The OMG body that carries out the technical aspects of adopting a new standard is the Task Force (TF). We have two types: Platform TFs and industry-specific Domain TFs. We've listed them all under these headings in the next section; look ahead if you want to check out the list now. Above the level of TF are two Technology Committees (TCs) – the Platform (PTC) and the Domain (DTC). A TF's vote only recommends issuance of a document or adoption of a submission; it is the TC's vote that actually issues the document or, in the case of an adoption, recommends it to the OMG's Board of Directors for its final vote. In this column, we'll report on every TF that met in Athens (and one that met in the USA one week before), including recommendations that were voted by the two TCs on Friday of the meeting week.

Another OMG body – the Special Interest Group (SIG) – is composed of members with similar interest but is not empowered to issue RFIs or RFPs, nor to recommend specifications for adoption. When SIGs move beyond discussion to influencing the adoption process, they must work in partnership with a cooperating TF. Because all voting OMG members may vote in every TF and SIG, this is not a handicap. In our Athens report, we'll tell about actions by several SIGs.

A new adoption process is typically initiated by a few TF members who decide that their business interests would support a particular standard. It's usually not hard for the initial few to find other interested folks, so soon the effort has enough participants to draft a document and check with other members for wider support. Sometimes a group of members in a domain get together to adopt standards in their industry but want to start by surveying many companies to determine which standards are most needed. They do this by drafting and issuing (by vote of the TF followed by vote of the TC) a Request for Information (RFI), in which they state what they're interested in and solicit responses from any person or company, OMG member or not. The deadline for responses is usually two meetings, or about 20 weeks, from the issue date. Submitters are invited to present their responses at the first meeting after the deadline, and participate in a discussion exploring possible standardization pathways.

Based on their own business need and the results of the RFI if they issued one, interested members identify the subject of the new standard they want to adopt and proceed to the next step: Determining the requirements and writing them into a document that OMG terms a

Request for Proposals or RFP. (This is not the same as an industrial RFP requesting bids – instead, it's a request for submission of draft candidate documents for the new specification.) In addition to the requirements, the RFP also sets key process deadlines.

All voting-level OMG members may help determine the requirements for the new specification, write the RFP, and vote to recommend it be issued. A smaller group of submitting companies (more about who these are in the next paragraph) respond by the first process deadline with Letters of Intent (LOIs), and then by the next deadline a few meetings later with initial draft specifications and, another couple of meetings after that, with revised submissions. All members participate in the submission evaluation, and in the TF vote that recommends a submission particular document be elevated to the status of official OMG specification. You might think that members would have to vote to select a preferred submission from several on the table, but this almost never happens – instead, submitters find that it's in their best interests to merge their good ideas into a single, group submission early in the process. This submitters' group then works with the other voting TF members (keeping in mind that every submitter is also a voting TF member) to ensure that all RFP requirements are met, before the series of adoption votes begins.

Who may submit? Submitting companies must be members of OMG at one of the three highest levels (Platform, Domain, or Contributing) and must commit, should their submission be voted by the members to become the specification that the RFP called for, to marketing a commercial implementation within a

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year of adoption. Because of this commitment, the submitting companies retain editorial control of their submission – the other voting members may request changes (and have considerable influence because their votes are needed to elevate the submission to a specification), but only the submitters may actually edit the document which, after all, represents a business plan that they must execute after a successful adoption vote. OMG welcomes any interested company to join at one of the requisite levels before applicable deadlines pass, and LOI and submit to an OMG RFP. For information about membership, see <http://www.omg.org/membership>; for assistance, send email to

[info@omg.org](mailto:info@omg.org).

And one last thing: OMG's Architecture Board (AB), responsible for the architectural integrity of our organization's suite of specifications, inserts itself into the process in two places: After drafting and vote by a TF, the AB must certify that an RFP is consistent with OMG's architecture before it may be issued by vote of a TC. Also, every final revised submission recommended by a TF for adoption must be certified by the AB before subsequent votes elevate it to formal specification.

RFPs and RFIs are public documents, since any company may respond. (A company will have to join before submitting to an RFP, of

course.) However, participation in the adoption process is a member privilege so access to submissions and email discussion is restricted to OMG members only. Members may access all process related documents from the Work in Progress web page (<http://www.omg.org/schedule.htm>); non-members may access RFPs and RFIs from [http://www.omg.org/public\\_schedule](http://www.omg.org/public_schedule) by clicking on any link after the word "document". Every adopted OMG specification is available to everyone without charge from the specifications page, <http://www.omg.org/specifications>. ■

## Robotics DSIG

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robotic vacuum cleaner and a Mars rover may seem vast, but they have a lot in common. For example, both require a method of sensing their environment and relaying information to the servos that control their movement. This commonality of design and function has created both an opportunity and a need for standards. The goal of robotics standards is to increase interoperability, compatibility and reusability.

OMG is an international software consortium responsible for establishing distributed computing specifications. OMG's **Robotics Domain Special Interest Group** is beginning the work that will lead to standards in robotics software design and development. In the past, most robotics software initiatives had been developed independently. The Robotics DSIG is looking to begin a dialog with vendors, end users, researchers, robotics organizations

and other interested parties to lay the groundwork for a common platform-independent model of robotics software development.

The first step in this dialog is to issue a Request for Information (RFI) on available products, projects, theories, models and requirements to support development of Service Robotic Systems based on distributed objects. Anyone can respond to the RFI once it has been issued, but only OMG members can shape the future of robotics standards.

The Robotics DSIG is currently developing the parameters for the RFI, so **now is the ideal time** to get involved! The Robotics DSIG will meet again in Boston, Mass. the week of June 20, 2005.

### FUTURE PLANS

The Robotics DSIG will issue an RFI to:

- Identify functional and architectural patterns to lead to a common platform-independent model
- Help set priorities and a focus for standards work
- Get to work!

For more information about joining OMG and participating in the Robotics DSIG or to be added to the Robotics email list, visit <http://www.omg.org> or contact us at [bizdev@omg.org](mailto:bizdev@omg.org).

# What's Up? Upcoming Events

## Boston Technical Meeting

The next OMG Technical Meeting will be held in Boston, Massachusetts on June 20-24, 2005. The meeting is being sponsored by IBM (<http://www.ibm.com>) and Raytheon (<http://www.raytheon.com>).

Highlights of the meeting include:

- MDA FastStart Seminar
- ADM Information Day: Introduction to Legacy Transformation Tool Sets
- Business Modeling Information Day
- OMG Technology Tutorials

For additional information on the Boston Technical Meeting, visit <http://www.omg.org/registration/registration-info-boston.htm>.

## Real-Time and Embedded Systems Workshop

The workshop will be held in Arlington, Virginia, USA on July 11-14, 2005. The workshop, co-sponsored by PrismTech & BAE Systems CNIR, is open to all with an interest in real-time, high-confidence, or embedded applications, services, tools and methodologies.

## Software-based Communications Workshop

*Expanding the Vision* is being sponsored by Boeing and will be held in San Diego, Calif. USA on August 15-18, 2005. The summit will explore concepts related to software-based communications, from today's military SDR programs to future deployments in commercial wireless networks and consumer devices.

## Atlanta Technical Meeting

Mark your calendars for the Atlanta Technical Meeting, September 12-16, 2005. Sponsorship Opportunities are still available! Contact us at [bizdev@omg.org](mailto:bizdev@omg.org).

# Technical Meeting Resource Hub Now Available

Be sure to visit the members-only Technical Meeting Resource Hub at <http://www.omg.org/members/TMResourceHub/>. There you will find meeting minutes and meeting summaries as well the following presentations:

"Agility in Modeling," by Stephen J.

Mellor, Chief Scientist, Mentor Graphics Corp.

"MDA with Executable UML: A Healthcare Illustration," by Allan Kennedy, Kennedy Carter Ltd.

"MDA - Outside the Box 'Model Management'," by Pete Rivett, CTO, Adaptive, Inc.

*Be sure to visit the Technical Meeting Resource Hub after each Technical meeting!*

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help putting your brilliance on paper, OMG would like to speak with you. We will post your story on our web site and pitch it to reporters. We'll even make a shiny collateral piece that will be included in our media kits. For more information, please contact Stephanie Covert at [scovert@omg.org](mailto:scovert@omg.org).

# Are You... Certifiable?

## UML® Certification Program

In 2003 the OMG launched its UML Certification program. Since then, several thousand people have taken the exam. The written exams test the candidates understanding of the concepts and uses of UML. There are three levels of UML certification, each with its own exam a Fundamental Exam, an Intermediate Exam and an Advanced Exam.

Information on the exams and the topics covered in each exam are available on the OMG's website at <http://www.omg.org/uml-certification>.

## Why Become UML® Certified?

In the fall of 2004, the OMG commissioned a study on the benefits of UML certification. A questionnaire was sent to a select group of UML certified individuals. The individuals who took part in the study could be roughly divided between those who worked for companies and

those who were independent consultants or worked for small consulting groups. About two-thirds of the participants were employees at companies while about one-third worked as consultants.

The survey asked each individual if, upon reflection, they had found the UML certification effort worthwhile. **Ninety-seven percent of those responding to the questionnaire felt that they had personally benefited from the experience.** Ninety-one percent said they would recommend UML Certification to their colleagues.

The survey asked UML certificate holders who worked for companies if they had received changes in their title or new job assignments as a result of their UML certification. Twenty-three percent reported that

*"Our prospects and clients were more accepting of our recommendations and consulting because they knew there was an institution behind the OMG UML Certificate logo that they could trust."*

*- Survey Respondent*

they had received a title upgrade or new assignments as a result of achieving certification.

The survey also asked individuals who worked for consulting companies or were self-employed as consultants if they had been able to charge higher fees or had acquired new work as a result of having UML certification. Forty percent reported that they had been able to charge higher fees or acquired new consulting work as a result of their UML certification.

For more information about the UML Certification Program, email [umlcert@omg.org](mailto:umlcert@omg.org) or visit <http://www.omg.org/uml-certification/index.htm>.



## EXCLUSIVE OFFER TO ATTENDEES!

### at the June 2005 OMG Boston Technical Meeting

Save \$30 or €26 when you take one of the official OMG Certified UML Professional Exams, any time in the next 30 days - June 20 through July 20, 2005 - anywhere in the world. Use the OMG Discount Voucher you will receive when you check in for the meeting on site in Boston to obtain your discount.

The Exams will be available at fully-equipped Test Centers in locations near you. Scheduling is usually flexible, so you can take the Exam when it is convenient for you.

In Boston, you will receive the discount voucher and instructions about how to register for the exams at this special price.

**THE NEWSLETTER OF THE  
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*OMG™ is an open membership, not-for-profit consortium that produces and maintains computer industry specifications for interoperable enterprise applications.*

*Our membership includes virtually every large company in the computer industry, and hundreds of smaller ones. Most of the companies that shape enterprise and Internet computing today are represented on our Board of Directors.*

*Our flagship specification is the multi-platform Model Driven Architecture® (MDA®). It is based on the modeling specifications UML®, MOF™, XMI®, and CWM™. OMG's own middleware platform is CORBA®, which includes the OMG IDL, and the IIOP protocol.*

*All of our specifications may be downloaded without charge from our website.*

*Any company may join OMG and participate in our standards-setting process. Our one-company-one-vote policy ensures that every company, large and small, has a effective voice in our process.*

## OMG News of Note

### Recent Press Releases:

#### **New Standards Focus on Computing Performance at OMG Technical Meeting**

*New OMG Profile for UML Will Enable  
Executable Models*

Members of the Object Management Group™ (OMG™) started work on a standard Profile to support executable models built using the organization's Unified Modeling Language™ (UML®) at their meeting in Athens, Greece during the week of April 11 to 15, 2005. The meeting was co-sponsored by Platinum sponsor Kennedy-Carter Ltd. (<http://www.kc.com>), gold sponsor Mentor Graphics (<http://www.mentor.com>), and silver sponsor Adaptive, Ltd. (<http://www.adaptive.com>).

#### **Health Level Seven, Object Management Group Begin Joint Healthcare Software Services Standardization Work**

*Combined Effort Leverages Strengths of  
Each Organization*

The OMG and Health Level Seven (HL7) are collaborating to build a set of standard healthcare-domain software components and services interface standards to promote open interoperability across health provider organizations and products. The initial focus of the effort is to address the need for standards directly supportive of electronic health record interoperability and information exchange.

To view these and all recent press releases, visit:  
<http://www.omg.org/news/releases/pr2005/pr2005.htm>

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