Welcome to OMG!
One of the largest and longest-standing not-for-profit, open-membership consortia developing and maintaining computer industry specifications.

Continuously evolving to remain current while retaining a position of thought leadership.

Long-term maintenance of proven standards
OMG Vertical Markets

Standards are developed by OMG using a mature, worldwide, open development process. With more than 25 years of standards work, the OMG one-organization, one-vote policy ensures that every vendor and end-user, large and small, has an effective voice in the process.

Finance
Government
Healthcare
Manufacturing

Military
Retail
Robotics
Space Exploration
Who are OMGers?

ACORD
Adaptive
Airbus Group
AIST
Appian
ASMG
AT&T
Benchmark Consulting
Boeing
Carnegie Mellon Univ.
CA Technologies
Cisco Systems
Deere & Company
Dell Technologies
Diebold Nixdorf
Erle Robotics
FICO
Ford Motor Company
Fujitsu
Georgia Tech
Genesco
Goldman Sachs
IBM
Johns Hopkins
Kongsberg Defence
Lockheed Martin
Mayo Clinic
Microsoft
MITRE
NASA
NIST
No Magic
Northrop Grumman
Oracle
Perry Ellis
Petrosoft
PTC
QualiWare
Real Time Logic
RTI
Salesforce.com
SAP SE
Seiko Epson
Siemens
Software AG
Sparx Systems
State Street
THALES
The Aerospace Corporation
Thematix
Twin Oaks
Ulta Beauty
Vitech Corporation
Liaison Relationships
## Best-Known Successes

<table>
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<tr>
<th>UML</th>
<th>SysML</th>
<th>BPMN</th>
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<td>Ubiquitous visual modelling language applicable to designing any software system</td>
<td>Supports the specification, analysis, design, and verification and validation of a broad range of complex systems</td>
<td>Business Process Model and Notation™ provides businesses with the capability of understanding their internal business procedures.</td>
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- **CORBA**: Common Object Request Broker Architecture™ is an object-based language- and platform-neutral interoperability standard
- **DDS**: Data Distribution Service™ is a real-time, data-centric, publish-subscribe OMG specification for data distribution
- **Meta-Object Facility**: The repository standard
Organization Growth

- Model Driven Architecture (MDA) – OMG approach to interoperability
- More than 160 unique specifications completed
- Currently 100 works in progress
- ISO/IEC JTC1 PAS & ARO - Stamp of credibility
- Create widely-accepted standards in <18 months
Recently approved:

- **ARTS XML Video Analytics** enables multi-vendor interoperability for advanced analytics like facial recognition, people/demographic counting, and hazard identification. Examples include software that recommends specific offers to shoppers who are recognized to be enrolled in a retailer's loyalty program, or an alert sent to a clerk if there is a problem in an aisle.

- **DDS_XRCE™** extends the security, scalability, performance and quality-of-service benefits of the Data-Distribution Service™ (DDS™) databus to resource-constrained devices, such as limited CPU and memory devices using very low-bandwidth communications, and battery-powered devices that need to undergo deep-sleep cycles.

- **IEF™ Reference Architecture** is a framework to develop a family of specifications for policy-driven, data-centric information sharing and safeguarding services. This framework will benefit operational environments that require the ability to share information within and beyond organizational boundaries and are challenged by unpredictable changes in operational contexts (e.g., threat, risk, roles and responsibilities, scale, scope, and severity) such as the military, public safety, national security and border safety.

- **OPC UA/DDS Gateway** defines a standard, bi-directional gateway that maps the operations and information flows in each technology (Data-Distribution Service or OPC-UA) to the other one so that an application using OPC-UA can consume information and services produced in DDS and vice-versa.

- **Tools Output Integration Framework™ (TOIF™)** provides a standards-based environment that integrates the outputs of multiple static analysis tools in a single uniform view of vulnerability information. Cyber security professionals, responsible for managing risks of software intensive systems, will find that TOIF-enabled static analysis tools and other TOIF-enabled tools provide enhanced vulnerability detection capability that builds upon both commercial and open source tools.

- **UnifiedPOS Version 1.15** is a widely accepted architectural specification for application interfaces to point-of-service devices used in a retail environment. It defines the structure of application interfaces to retail devices such as scanners, printers and scales, and describes the range of functionality in these devices that would typically be needed for point-of-sale (POS) software solutions.
Value of Membership

Technical Benefits
• Network with industry experts
• Influence the technology adoption process
• Access all OMG documents
• Gain industry-wide recognition
• Publish your work
• Know how the standards you care about are evolving

Business & Marketing Benefits
• Promote Your Commitment to OMG Technology
• Make use of OMG Tutorial Package
• Promote your Training Offerings on OMG Website
• Develop business partnerships
• Receive discounts on conference attendance
• Secure public speaking opportunities
• Demonstrate your company's OMG-based technology
Value of Participating

• Know the direction of standards before public adoption begins: be a market leader

• Influence the direction of standards: leadership saves time & money downstream

• Access to documents, presentations, white papers, design decisions before public access and completion

• Gain recognition for leadership by speaking, publishing & leading
OMG Managed Programs
Industrial Internet Consortium (IIC)

• Mission: to accelerate growth of the Industrial Internet by coordinating ecosystem initiatives to connect and integrate objects with people, processes and data using common architectures, interoperability and open standards that lead transformational business outcomes.

• Launched in March 2014 by five companies:

• An open, neutral “sandbox” where industry, academia, and government meet to collaborate, innovate, and enable.

https://www.iiconsortium.org/
• Industry leadership group committed to measuring and improving application software quality and productivity
• IT Executives from the Global 2000, System Integrators, Outsourced Service Providers, and Software Technology Vendors
• Develops specifications for automating measures critical to software productivity and quality
• Provides forum to promote and exchange industry best practices and ideas
• Advises and educates business and government leaders on policies for mission critical application quality

Accomplishments include:
• Led the adoption of Automated Function Point specification by OMG
• Published automatable Quality Characteristic specifications for Reliability, Performance Efficiency, Security, and Maintainability, soon to be submitted for OMG approval
• Has held multiple successful seminars on adopting best practices for measuring and managing software productivity and quality

www.it-cisq.org
OMG Certifications

• Gain recognition of your competency, prove you are committed to your profession, and motivate other colleagues to enhance their skills. Become certified through OMG® and proudly display your qualifications by including the OMG Certification logo on your business cards, on your resume and online in our Certified Professionals Directory!

https://www.omg.org/omg-certifications/index.htm
Resources

Hitchhiker’s Guide
http://doc.omg.org/hh

Policies & Procedures
http://doc.omg.org/pp

Specifications Catalog
https://www.omg.org/spec/

Work in Progress – open RFPs
https://www.omg.org/public_schedule/
Technology Process Overview

Larry Johnson
VP and Technical Director
Technology Process Overview

- Mature
- Open
- Member driven
- Fair
- Disciplined
- Does NOT produce shelfware
- Built upon best practices, not research
- Timely
- Specifications are freely available
- Technical and Business tracks
- Evolutionary, not stagnant
OMG Organization

Architecture Board

- Intellectual Property Policy SC
- Liaison SC
- Object & Reference Model SC
- Spec Mgmt. SC
- Business Architecture SIG
- Model Interchange SIG

Platform TC

- A & D PTF
- ADM PTF
- MARS PTF
- Methods & Related Tools PSIG
- SysA PTF
- Agent PSIG
- Data Distribution PSIG
- Ontology PSIG

Domain TC

- BMI DTF
- C4I DTF
- Finance DTF
- Government Information Sharing & Services DTF
- Healthcare DTF
- Mfg. Tech & Ind. Systems DTF
- Retail DTF
- Robotics DTF
- Space DTF
- Workplace Benefits DTF
- Mathematical Formalisms DSIG
- Sys Eng DSIG
OMG adopts and publishes interface specifications
  • Implementation available from at least one OMG member
• Interfaces freely available to all (members or not)
  • No export restrictions
  • No specification license, no payment
  • Best-effort assurances on IPR constraints
  • Interface selection via open process, now used >200 times
• Usual adoption process centers on Request for Proposals
  • Requirements document
  • Written by Task Force, vetted by AB, issued by TC
  • OMG members may then respond with proposed specifications
The OMG Process (2)

- **RFP Submissions**
  - Specifications only, not software that implements them
    - ... but OMG will want to see evidence of commercial or OSS implementation, or actual use at end-user organization
  - Written by submitters outside OMG
  - Evaluated by Task Force
  - After 1-3 rounds of submit-evaluate-revise-resubmit, TF will vote to recommend one submission
  - AB evaluates recommended submission for architectural consistency
  - TC passes recommendation to BoD
Alternate Route: RFC

• Allows OMG members to submit complete specifications for “instant” adoption by OMG

• Submitters bring completed specifications to OMG
  • Is by Task Force and Architecture Board to ensure it fits into the overall OMG architecture
  • Must meet other usual criteria on structure, ownership etc.
  • Then issued vetted for comment to entire industry – adverse comment can stop the process
Finalizing Specifications

• Once adopted, specifications are “Finalized” by Finalization Task Force (FTF)
  • Fixed slate of named member representatives
  • Experts in specification and domain
  • Fixed timetable to turn submission into publishable specification, cleaning up any bugs found by early users
  • Draft (“Beta”) specification available to public and bug (“issue”) reports accepted from anyone
• OMG actively maintains specifications throughout their life
  • Revision Task Force typically issues annual minor revisions
• Publicly-available Specification (PAS) liaison with ISO/IEC JTC1 allows some to be fast-tracked to full ISO/IEC standard
  • e.g. BPMN 2.0.1 is ISO/IEC 19510:2013
• Major revisions handled via new RFP or RFC
  • UML 2.x supersedes UML 1.x
  • At end of life, sunsetting procedure allows redundant specifications to be formally removed from the books
Ownership & Copyright

• Discussion and negotiation of submission content occurs, but always outside OMG
  • No anti-trust exemption

• Submitters continue to own copyright of their specifications

• OMG & its Members get licenses to duplicate submissions for evaluation
  • If spec adopted, OMG gets unlimited license to publish specification and derivative works (e.g. new revisions)

• No confidential material may be submitted to OMG or discussed at an OMG meeting
Patent policy

• “IPR Mode” assigned to a specification and all its later minor revisions (x.0, x.1, x.2 ...)
  • By submitting, or joining RTF/FTF, Member automatically agrees to offer all implementers license for any essential IPR owned, on terms compatible with IPR Mode

• Three modes:
  • Reasonable And Non-Discriminatory (RAND) terms
  • Royalty Free on Limited (RF-Limited) terms
  • Non-Assert covenant

• All modes permit defensive suspension
  • Allows IPR mode protections to be suspended for any patent owner that sues an implementer for infringement
Member Engagement and Business Development Team

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