



Standards
Development
Organization®

OMG Introduction

With a Focus on
Unified Architecture Framework (UAF)

UAF Summit 2023

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OMG & MANAGED PROGRAMS

The Object Management Group (OMG) mission is to develop technology standards that provide real-world value for dozens of vertical industries. OMG is dedicated to bringing together its international membership of end-users, vendors, government agencies, universities and research institutions to develop and revise these standards as technologies change throughout the years.



34 Years of Excellence

About OMG



Founded in 1989



International Standards Development Organization



250+ Specifications



240+ Member Organization



13 Specifications Ratified As ISO Standards

www.omg.org

Standards are developed by OMG using a mature, worldwide, open development process. With more than 34 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



A Voluntary Consensus Standards Body (VCSB)

Who are OMG Members?

- 
- 88solutions
 - Advanced Systems Management Group Ltd.
 - Airbus Group
 - AIST
 - Amergint Technologies
 - Advanced Management Systems Group (AMSG)
 - Analytical Graphics, Inc.
 - Appian Corporation
 - Auxilium Technology Group
 - BAE SYSTEMS
 - Bloomberg LP
 - BOC Products & Services AG
 - Boeing
 - BookZurman
 - Braxton Technologies, LLC
 - Caltech CTME
 - Camunda Services GmbH
 - Capsifi
 - Carnegie Mellon University
 - CAST Software
 - CCSDS
 - Collibra
 - Commissariat a l'Energie Atomique-CEA
 - CONTACT Software
 - Dassault Systemes
 - Decision Management Solutions
 - Decisions
 - Dell Technologies
 - Delligatti Associates, LLC
 - Department of Navy
 - Department of Veterans Affairs
 - EASC e.V.
 - Elbit Systems of America
 - Elparazim
 - eProsimia
 - FICO
 - Ford Motor Company
 - Fraunhofer FOKUS
 - Fujitsu
 - Georgia Institute of Technology
 - GfSE e.V.
 - GurumNetworks, Inc.
 - INCOSE
 - InterCAX
 - International Business Machines
 - JARA
 - K.U. Leuven
 - Kaiko
 - KDM Analytics
 - Kongsberg Defence & Aerospace
 - Kratos RT Logic, Inc.
 - Lockheed Martin
 - Mantech International Corporation
 - Maplesoft
 - Mayo Clinic
 - MEGA International
 - Mercury Systems
 - Micro Focus
 - Microsoft
 - MIT/Lincoln Laboratory
 - MITRE
 - Model Driven Solutions
 - NASA
 - Naval Surface Warfare Center
 - NIST
 - Northrop Grumman
 - OAR Corporation
 - Object Computing, Inc. - OCI
 - Objective Interface Systems
 - Office of the Secretary of Defense
 - oose Innovative Informatik eG
 - Open Geospatial Consortium
 - Peraton
 - processCentric GmbH
 - PROSTEP AG
 - ProSTEP iViP Association
 - PTC
 - QualiWare
 - Real-Time Innovations
 - Red Hat
 - Rolls-Royce Corporation
 - Sapiens Decision NA
 - Security Compass
 - Siemens
 - Signavio GmbH
 - Simula Research Laboratory
 - SimVentions
 - Softeam
 - Space Dynamics Laboratory
 - Sparx Systems Pty Ltd
 - Syntell AB
 - TCS
 - THALES
 - The Aerospace Corporation
 - The MathWorks
 - The Open Group
 - Thematix Partners LLC
 - Tom Sawyer Software
 - Trisotech
 - Twin Oaks Computing, Inc.
 - UML Technology Institute
 - US Navy
 - Vanderbilt University
 - Visible Systems Corporation
 - Vitech Corporation
 - W3 Consortium
 - Webel IT Australia



MOSA Quad Chart – Unified Architecture Framework™ (UAF™)

Program Description

The UAF® standard represents the unification and demilitarization of a proliferation of defense AFs (i.e. DoDAF, MODAF™ & NAF). UAF includes:

- **UAF Domain Meta Model (DMM)** – an implementation independent specification of UAF concepts, relationships, constraints, viewpoints and views which can be implemented by non-SysML tools.
- **UAF Profile (UAFP)** – a SysML profile specification for implementing UAF DMM in UML/SysML tools. UAFP implementations are commercially available.

Program Capabilities

- Based upon an orthogonal 3-Dimensional Table that readily locates information
- Utilizes OMG's Systems Modeling Language (SysML®) & Unified Modeling Language (UML®)

Program Modular and Open System Approach

- Enables Model-based Enterprise Architecture (MBEA) methods based on an integrated model repository as an authoritative source of truth.
- Supports separation of concerns, modularity and reuse
- Supports semantic interoperability through the use of a common vocabulary enabling:
 - Portfolio and capability management
 - SoS Operational planning and Mission Engineering
- Provides foundation and context for analysis and decision support
- Provides traceability and change impact across all dimensions
- Provides opportunity for process automation and reasoning
- UAF is methodology-agnostic (structured, OO, etc.)
- Extended UPDM with additional architectural dimensions: Security, Personnel, Requirements, Analysis, Simulation with full cross-cutting Traceability using a common semantic vocabulary



Standard means of expression – Representational Formats (Model Kinds)

	Taxonomy	Structure & Connectivity	Behavior	Information	Parameters	Constraints	Roadmap	Traceability	
Different Domains (Aspects)	Strategic	Understand enterprise objectives, defining and deploying cap							Traceability across all levels
	Operational	Understand the SoS from Operational/ Logical Perspecti							
	Services	Identify Services to abstract behaviour and capabilities							
	Personnel & Resources	Understand constituent Systems of Systems and relationsh personnel/organizations							
	Security	Cyber Security Analysis							
	Projects	Understand project development milestones							
	Standards	Standards compliance							
		Requirements							

<https://www.omg.org/uaf/index.htm>

Key Accomplishments/Status

- Coordination between The OpenGroup & OMG concerning
 - UAF & Archimate interchange
 - Future Aircraft Capability Environment (FACE)
- Recommended by NATO Architecture Capability Team (ACaT)
- Commercial implementations are available

Key Milestones

UML for DoDAF 1.0	2005
UML for DoDAF 2.0	Jul 2010
UML for DoDAF/MoDAF 2.1	Aug 2013 (UPDM)
UAF 1.0	Jul 2016
FACE Profile for UAF Approved	Sep 2020
UAF 1.1 RTF Submission	Mar 2019