

## **Modular Open Systems Approach (MOSA) Enabling Environment (EE) Working Group Charter**

July 14, 2023

While not an “official” C4IDM DTF action since this is an internal working group, “voting” was as follows:

SimVentions moved to accept the charter as modified

Adaptive Solutions Second

MITRE proposed a white ballot.

No objections.

The working group chairs: Nadine Geier (Manager Navy - Office of the Under Secretary of Defense for Research and Engineering), Lou Eyermann (Senior Enterprise Architect & Systems Engineer - Insight Global), and Cory Casanave (CEO – Model Driven Solutions) are planning meetings every two weeks on Friday morning and a longer in-person meeting at the OMG Technical Meeting in Chicago, IL on Wed, September 27.

### **Mission and Goals**

The Modular Open Systems Approach (MOSA) Enabling Environment Working Group of the Object Management Group (OMG) operates under the C4I Defense and Military Domain Task Force (DTF). It is focused primarily on supporting the establishment of a MOSA Enabling Environment, an enterprise-wide platform with OMG standards-based repositories and capabilities (infrastructure) to support the United States Department of Defense (DoD) and its military services as well its applicability to other federal agencies and other international military coalition partners. The Enabling Environment Pillar will support the other four MOSA pillars, MBSE, tooling and other future MOSA enabling requirements. The Enabling Environment will also support standards based MBSE capability to publish, find, discover, evaluate, and use the definitions of modules of defense systems through well-defined physical and cyber interfaces to further the modular acquisition goals of the DoD. This enterprise-wide platform with repositories and semantic capabilities is the “MOSA Enabling Environment”.

There are five pillars of MOSA: (1) An enabling environment; (2) Modular design, (3) Key interfaces; (4) Open standards, and (5) Certifying conformance. This task force will focus on the technologies and platforms that can offer an enterprise-wide solution for the DoD, i.e., the Office of the Secretary of Defense and each of its military services (Army, Navy, Marines, Air Force, and Space Force). Each Service must be capable of integrating programs, program offices, the acquisition communities and digital engineering development and integration environments across DoD and within each military service.

### **The MOSA EE Working Group’s mission is to:**

- Examine and communicate the requirements of a MOSA-enabling environment to OMG and its various subgroups and DoD.
- Foster use of OMG adopted standards as specified in the OMG Specification Catalog including, but not limited to:

- OMG SysML (a general-purpose modeling language for modeling systems that is intended to facilitate a model-based systems engineering (MBSE) approach to engineer systems)
- OMG UAF (assists in development of architectural descriptions in commercial industry firms, federal government agencies and defense organizations; an evolution of UPDM with extended scope)
- OMG FACE Profile for UAF (a mechanism to model the Open Group's Future Airborne Capability Environment data architecture and components using UML-based tools)
- OMG UML (a graphical language for visualizing, specifying, constructing, and documenting models)
- OMG MOF (the basis for metamodel definition in the OMG family of MDA languages and is based on a simplification of the UML2 class modeling capabilities. MOF provides a generic interface supporting but not tied to any of these specific specifications; and it provides the ability to create new extended metamodels)
- Assist the United States DoD and coalition partners with developing an enterprise platform with repository that provides insightful solutions that differentiate MBSE modeling tools capabilities and those better served by a MOSA enabling environment at an enterprise level to improve interoperability. It also includes a federation of standards-based repositories for the DoD and its Services.
- Examine Artificial Intelligence opportunities, augment and provide increased efficiencies of OMG standards to support and integrate with enterprise platforms. and,
- Encourage vendors of products incorporating OMG-adopted technology to support features and capabilities relevant to DoD technical (programs, program offices, acquisitions and digital engineering and integration environments) and business interoperability within the military services (Army, Navy, etc.) and enterprise (DoD).

**The MOSA EE WG goals are to:**

- Foster the development and establishment of new standards and guidance on how to achieve a MOSA EE.
- Educate program managers, technical experts, and business leaders across the government and industry on OMG standards that can immediately promote developing and including Modular Open Systems Approaches to enterprise-wide business and technical solutions. and,
- Develop a road map, requirements, capabilities, use cases, business case analyses, trade studies, demonstrations, technology standards, and recommendations to promote understanding of a MOSA-EE that provides enterprise-wide technical and business solutions.

NOTE: For information and reference documents on MOSA and the MOSA Enabling Environment refer to the MOSA Enabling Environment Working Group's Wiki.