

Architecture Committee Report

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Ed Moshinsky, Co-Chair

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- **Meeting Bi-Weekly, w/Separate Sub-Committee Meetings:**
 - MOSA Metrics (Modularity / Openness)
- **2019 Focus Area: Modular Open Systems Approach (MOSA)**
 - Support to DoD/Services (Phil Zimmerman, et. al.)
 - MOSA Standardization
 - MOSA Requirements on Acquisition Programs
 - MOSWG (Modular Open Systems Working Group) Participation by Arch. Committee Members
 1. Committee is engaged as a **contributing participant of the MOSWG**
 2. Scheduled to **brief Committee activities to MOSWG** meeting March 13(?)
 3. Several Committee members **volunteered to be part of the Tiger Team on MOSA** Standards Identification & Development
 - Revisions to MOSA Recommendations and White Paper
- **Other Engagements:**
 - Use Cases for SysML 2.0 Draft Update Submitted in Jan. (Laura Hart, et. al.)
 - SE Transformation Pilot Initiative Research by Mark Blackburn (scheduled to brief Architecture Committee on Feb. 13)
 - MBSE & Architecture Frameworks (UAF etc.)
 - TBD: Architectures in Mission Engineering
- **Currently > 50 Members – Cross-Section of Industry & Govt.**
 - Incl. DoD Sponsors: Philomena (Phil) Zimmerman, Monique Ofori (Proxy)
 - About 1/4 are regularly engaged participants

Architecture Committee Current Membership



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Summary of MOSA White Paper Recommendations (Revised)

- 1. Develop MOSA strategy:** Explicitly state MOSA objectives, desired outcomes, and the strategy/plan for getting there at all appropriate levels.
- 2. Define MOSA Implementation Approach for Each Level of Design:** Define levels of modularity and openness addressed, planned partitioning, what and how interfaces are to be controlled, and the domain in which commonality is desired.
- 3. Incorporate cybersecurity strategy in a MOSA application at the time of initial design, not as a later addition:** Design-in SSE up front and as part of the system architecture
- 4. Define Interfaces in Terms of MIL-STD-881D Taxonomy Levels of Detail (2 and 3 Digit Level, i.e. Major System Levels; For example, 4-digit level would be a radar system, air frame, propulsion, power, etc.):** MIL-STD-881D is important for establishing a common language, and needs to be used consistently
- 5. DOD and industry work together to define how to evaluate MOSA and certify as MOSA compliant:** Define MOSA metrics, evaluation process, certification requirements, and create library of MOSA certified systems
- 6. Develop and implement factors to enable culture change required for successful widespread adoption of MOSA:** Includes OSMP, MOSA in Technical Reviews, and MOSA Strategy Defined at all levels of the system
- 7. Apply MOSA to Software Architectures at Appropriate Levels of Abstraction and Complexity:** Develop a SW taxonomy similar to 881D to guide development of SW MOSA along with the targeted applicable SW domain
- 8. Implement MOSA as part of a larger and more robust Digital Engineering strategy**