Background

- UPDM Requirements derived from DoDAF and MODAF requirements
- UPDM development included broad industry participation from tool vendors and end users, as well as DoD/MOD inputs to requirements
- UPDM supports current DoDAF/MODAF requirements and can evolve to meet future needs:
  - Can produce standard DoDAF products
  - Leverages cross industry standards based approaches (e.g., MDA®, UML®, SysML™) to enhance tool and architecture data interoperability
  - MDA foundation enables UPDM to evolve with DoDAF v2 and beyond (i.e. SOA)
  - UPDM is methodology agnostic (structured, OO, etc.)

Approach: Profile Conformance

- The profile has two conformance levels:
  - Level 0 – all UML may be used
  - Level 1 – defines SysML - specific extensions to Level-0

- We expect models created conformant with Level 0 and Level 1 to be interoperable since:
  - Standard UPDM profile being used
  - XMI 2.1 specified as the basis for interchange
  - UML 2.1.1 specified as the base language for Level 0
  - Limited to the UML4SysML subset
  - Level 1 extensions based on standard SysML profile of UML

Approach: Role of UPDM MetaModel

- DoDAF and MODAF concepts were used as inputs for the UPDM Domain MetaModel
- The Domain MetaModel established the context for the UML profile

Approach: ModelBased

- As the complexity of a problem increases, the use of modeling becomes necessary to describe both the problem space as well as the solution.
- Providing additional DoDAF/MODAF semantics to the modeling experience allows users to create models that exhibit those semantics.
- These semantics provide consistency and allow generation of the typical DoDAF/MODAF products as views of the model contents.
- The model becomes the repository from which various views can be extracted.
DoDAF Artifact Approach: Deriving the View from the Model

• The specification provides support for information needed to deliver all DoDAF products but does not constrain users to use UML or SysML. If the architecture can produce the needed elements, then it is “UPDM compliant” for the view.
• The specification provides mechanisms to support export of information to other tools, such as a project management tools.
• The specification also supports clear mechanisms for extensions of new views as needed on projects. For example, security, logistics, or service delivery might require additional diagrams.
• Annex B of the specification provides a non-normative overview of strategies for delivering products based on the profile elements.

Summary

• Conformant specification that addresses DoDAF and MODAF needs
• Standards-based approach will enhance tool and architecture data interoperability
• MDA foundation enables UPDM evolution to support DoDAF v2 and beyond as needs evolve (e.g., SOA)
• Integrates Architecture and Engineering
• Exploitation of both UML and SysML
• Unified submission
• Supported by broad industry consortium of tool vendors and end users
• Working proof of concept
• Demonstrated at OMG

Want to learn more?

We would be happy to discuss how OMG membership would benefit your organization. Please feel free to explore our website at http://www.omg.org and when you are ready, please contact our Business Development team via E-mail at bd-team@omg.org to get started.