**Editor**  
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**Additional experts**

**Short Description/Transmitted Information**
- Standard for model-based Enterprise Architecture
- Provides a graphical, descriptive, semi-formal modeling language and an architecture framework
- Implemented as an extension of SysML

**Application Scope**
- Focus on Enterprise Architecture (i.e. Systems of Systems) rather than on specific systems
- Based on existing standards from military, but generic and applicable to other industries

**Maturity**
- Assessment of Potential

**Goals**
- Bring the benefits of the model-based approach (traceability etc.) to Enterprise Architecture
- Provide a model-based Enterprise Architecture standard for industries other than military as well
  - Support the analysis and development of complex Systems of Systems
  - Describe strategies, goals, missions and the required resources
  - No focus on specific systems (technical implementation etc.)

**Penetration**
- Individual expert teams

**Visibility**
- Approx. 10%

**Promoting Bodies**
- OMG
- INCOSE

**Type**
- OMG Standard

**IT Standard Classification**
- Modeling Standard

**Data Format**
- Graphical modeling language
Factsheets – Fact Sheet: Unified Architecture Framework (UAF)

### Relations to other standards
- Extension of SysML

### Overlap with other standards
- UAF is based on existing Enterprise Architecture frameworks from military, e.g. DoDAF (US Department of Defense Architecture Framework), MODAF (UK Ministry of Defense), NAF (NATO)
- UAF wants to unify these frameworks

### Available accompanying documentation
- **(Software vendors)**
  - Slides sets (and some Youtube videos) from OMG and different software vendors freely available online
  - These slide sets / videos try to introduce UAF and explain what it is, rather than talking about how to use it
  - Documentation shipped with authoring tools

- **(Industry Users)**
  - None so far

- **(Management)**
  - None so far

### General Details Positioning in V-Model Relevance and Benefit for MBSE Risks and Impediments

**Additional Resources**

UAF provides a modeling language and an architecture framework

**Modeling language:**
- Defines entities (Capabilities, Activities, Resources, Measures etc.) and relations that make up an Enterprise architecture
- UAF is implemented as a SysML extension
  - Looks and feels very much like SysML
  - Integration of UAF (SoS model) and SysML (system model) possible
  - UAF is integrated in current releases of all major SysML authoring tools
Architecture framework:

- UAF provides a structure (the UAF Grid) to organize the Enterprise Architecture model into views
- The UAF Grid breaks down an Enterprise Architecture into different domains / layers (rows, e.g. Strategy, Services, Security)
- Each domain / layer can be described by different model kinds (columns, e.g. Structure, Behavior, Parametrics)
UAF does not focus on the development of specific systems, e.g., mechanical or E/E design or integration are not part of UAF.

Positioning in the SSB V model needs to be discussed.

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### General Details

#### Positioning in V-Model

- Relevance and Benefit for MBSE
- Risks and Impediments

#### Additional Resources

- UAF does not focus on the development of specific systems, e.g., mechanical or E/E design or integration are not part of UAF.
- Positioning in the SSB V model needs to be discussed.
Little adoption of UAF yet → currently there’s simply a vision for the relevance and benefits of UAF in Collaborative Systems Engineering:

- Vision based on analogy between military and automotive
- UAF’s origins: military domain
  - Military needs to ensure that Systems of Systems (consisting of personnel, aircraft, marine etc.) collaboratively accomplish a mission
  - Enterprise Architecture models provide a specification and communication platform to manage information and complexity
  - This platform supports military in creating and managing Systems of Systems (procurement, development, maintenance etc.)
- Automotive domain has the same challenge: Develop and manage Systems of Systems
  - How to ensure different systems (manufacturer, maintenance, infrastructure etc.) collaboratively accomplish the mission Personal Mobility?
  - Enterprise Architecture / UAF can support development & execution of new strategies / business models
- Model-based & Standardized from head to toe:
  - UAF could provide the highest-level building block for an integrated chain of standards
  - System of System architecture (UAF) ↔ Processes (BPMN) ↔ System architecture (SysML) ↔ Implementation (DSL, e.g. UML)
UAF is a new standard (version 1.0 released in 11/2017) with low maturity, little penetration and low visibility especially in non-military domains

- UAF itself is complex
  - Statement from INCOSE: UAF has a long and shallow learning curve → expect slow adoption
- Little real-world experience / best practices / documentation available that could help with adoption
- Risk and impediments of SysML also apply to UAF

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**Additional Resources**

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1 https://intranet.prostep.org/download/attachments/22806744/DoDAF_DataModel.PNG?api=v2
2 https://intranet.prostep.org/display/~petertabbert
3 https://intranet.prostep.org/download/attachments/22806744/OMG_UAF_Grid.PNG?api=v2
4 https://intranet.prostep.org/display/~petertabbert
5 https://intranet.prostep.org/download/attachments/22806744/Positioning%20of%20UAF%20in%20V-Model.png?api=v2
6 https://intranet.prostep.org/display/~petertabbert
7 https://intranet.prostep.org/download/attachments/22806744/
8 Fact Sheet_%20Unified%20Architecture%20Framework%20%28UAF%29.pdf?api=v2
9 https://intranet.prostep.org/display/~petertabbert