

The MODAF All Views Viewpoint

Viewpoint Summary


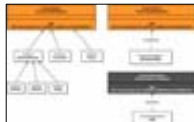
The All Views (AVs) Viewpoint provides the essential reference information about the architecture, including: an overarching description of the architecture; its scope; ownership; timeframe; and the metadata necessary to define the terminology used in the architecture, and to enable the architecture to be searched and queried. It also provides a place to record any findings arising from the architecting process.

Since the AVs provide critical information for the future access and exploitation of the architecture, it is essential that they are fully populated whenever a MODAF architecture is created or modified.

All View products provide information pertinent to the entire architecture. They present supporting information rather than architectural models.

Views

There are two views that make up the All Views Viewpoint:

- 1  [AV-1 - Overview & Summary Information](#) Page 2
Provides executive-level summary information about the architecture in a consistent form that allows quick reference and comparison between architectural descriptions.
- 2  [AV-2 - Integrated Dictionary](#) Page 5
Catalogues and describes all the Elements used in an architecture, and the relationships between them.

AV-1 - Overview & Summary Information

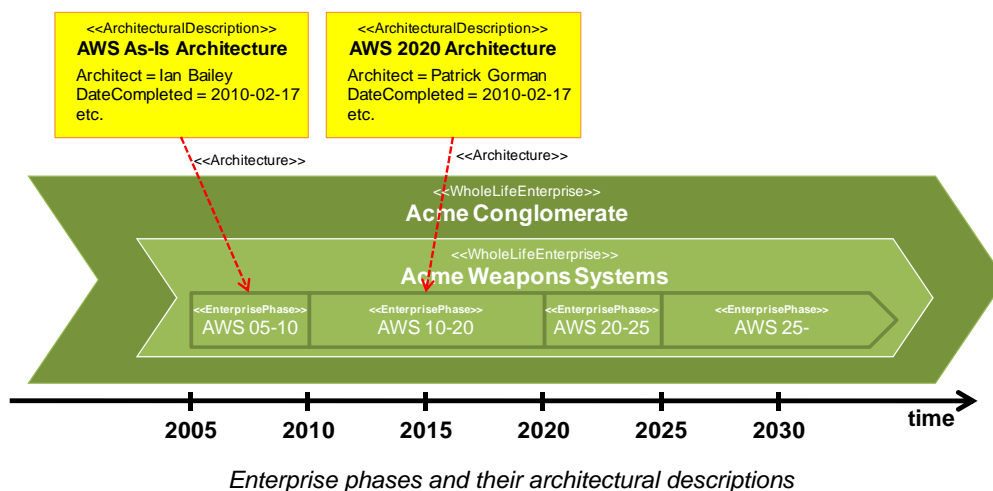
View Summary

The AV-1 provides executive-level summary information about the architecture in a consistent form that allows quick reference and comparison between architectural descriptions. The AV-1 includes assumptions and constraints that may affect high-level decisions relating to an architecture-based work programme. The AV-1 also puts the architecture in context of the Enterprise it describes and the period of time the architecture covers. This context is intended to enable registration and discovery of architectures.

Background

The development of the architecture must be framed in the context of the AV-1 which defines the scope of the enterprise and the phases of that enterprise that the architecture covers.

Enterprises (M3 object = WholeLifeEnterprise) can themselves be decomposed into sub-enterprises and enterprise phases, as in the example below. (This mechanism is an enabler for federated architectures and serves as a front-end for users trying to find a given architecture in a repository). The AV-1, therefore, needs to explicitly define the enterprise phase it is addressing.



The AV-1 also serves two additional purposes:

- In the initial stages of architecture development, it serves as a planning guide.
- When the architecture is built, it provides summary information concerning the “who, what, when, why, and how” of the plan, as well as a navigation aid to the views that have been created.

Ultimately, the AV-1 should contain sufficient information to enable an analyst to identify relevant architectures that could be re-used to support other business change activities.

The AV-1 will change as the architecture develops and it is, therefore, important to maintain it throughout the life of the architectural activity that it documents.

Usage

The AV-1 is used for:

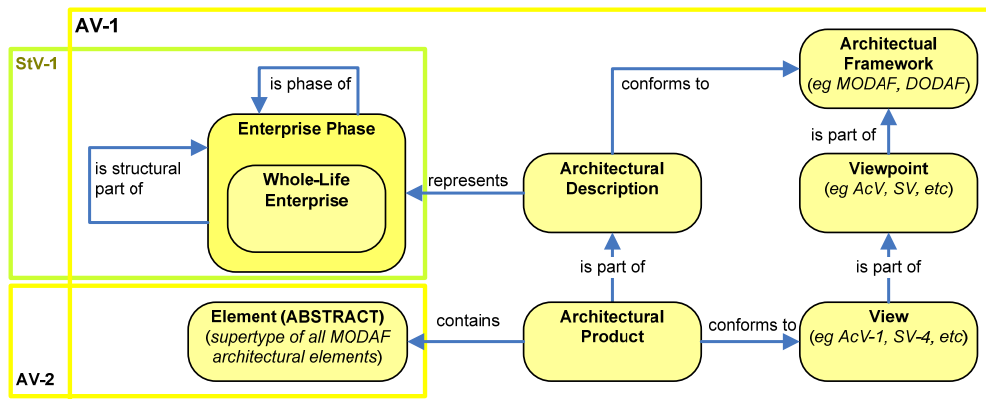
- Scoping the project.
- Providing context to the project.
- Defining an architecture-based task.

- Summarising the findings from an architecture-based task.
- Assisting search within an architecture repository.

Data objects

The data in an AV-1 can include:

- Scope, purpose.
- Whole-Life Enterprise & Enterprise Phase.
- Listing of views used.



Relationships between Key Data Objects (Simplified from M3)

Representation

- Structured Text.
- Enterprise phases may also be shown graphically.

Detailed Product Description

AV-1 is usually a structured text product, and architects may create a template for the AV-1 that can then be used to create a consistent set of information across different architecture-based projects that they are responsible for.

The AV-1 documents the following information about the architecture:

- **Architecture Project Identification:** the architecture project name, the architect, and the organisation developing the architecture. It also includes assumptions and constraints, identifies the approving authority and the completion date, and records the level of effort required to develop the architecture.
- **Scope:** the Views and Products that have been developed and the temporal nature of the architecture, such as the time frame covered, whether by specific years or by designations such as current, target, transitional, etc. Scope also identifies the Enterprises and Enterprise Phases that fall within the scope of the architecture.
- **Purpose and Perspective¹:** the need for the architecture, what it will demonstrate, the types of analyses that will be applied to it, who is expected to perform the analyses, what decisions

¹ "Perspective" could refer to one or more MODAF viewpoints, the MODAF Community of Interest, a focus for the work (e.g. integration or security), or a combination of these.

are expected to be made on the basis the analysis, who is expected to make those decisions, and what actions are expected to result.

- **Context:** a description of the setting in which an architecture exists. Context includes such things as mission, doctrine, concepts of operation, threats, environmental conditions, and geographical areas addressed. Context also identifies the rules, criteria, and conventions that are used in the architecture. Any linkages to parallel architecture efforts should be identified.
- **Status:** a description of the status of the architecture at the time of publication or development of the AV-1 (which might precede the architectural development itself). Status refers to creation, validation and assurance activities.
- **Tools and File Formats Used:** the tool suite used to develop the architecture and file names and formats for the Architectural Products if appropriate.
- **Assumptions and Constraints.**
- **Date Completed.**

An illustrative example is provided below.

AV-1 Overview and Summary Information

- **Architecture Project Identification**
 - Name: **ITT for Service Management System (Network), SMS(N)**
 - Architect: **DCSA DCTO Architecture 4**
 - Organisation Developing the Architecture: **DCSA / DCTO**
 - Assumptions and Constraints: **None**
 - Approval Authority: **Hugh Turbett, Project Manager**
 - Date Completed:
- **Scope: Architecture Views & Products Identification**
 - Views and Products Developed: **AV1, AV2, StV6, OV1 and OV2**
 - Time Frames Addressed: **Present**
 - Organisations Involved: **DCTO and SMS(N) Project Team**

Example AV-1

Normally architecture is used to support analysis; therefore the AV-1 can be extended to include:

- **Findings:** the findings and recommendations resulting from the architectural effort. These may include capability gaps identified and recommendations on how, for example, processes or systems could be changed to address the gap.
- **Costs:** the costs that have been incurred in developing the architecture in order to support a cost-benefit analysis of the architectural effort against changes implemented as a result of the architecture.

The AV-1 can be particularly useful as a means of communicating the methods and rationale that have been applied to create the other (MODAF) views in the architecture and the modelling assumptions that have shaped those views. To support this, the AV-1 should list each individual view product and provide a brief commentary against each.

On completion of the architectural activity, a final version of the AV-1 should be produced to summarise the findings for high level decision makers. This version of the AV-1 together with an OV-1, High-Level Operational Concept Graphic, can serve as an executive summary of the architecture.

AV-2 - Integrated Dictionary

The AV-2 catalogues and describes all the Elements used in an architecture, and the Relationships between them. It presents all the Elements as a specialisation hierarchy, provides a text definition for each one, and references the source of each element.

Background

The purpose of the AV-2 is to explain the terms and abbreviations used in building the architecture.

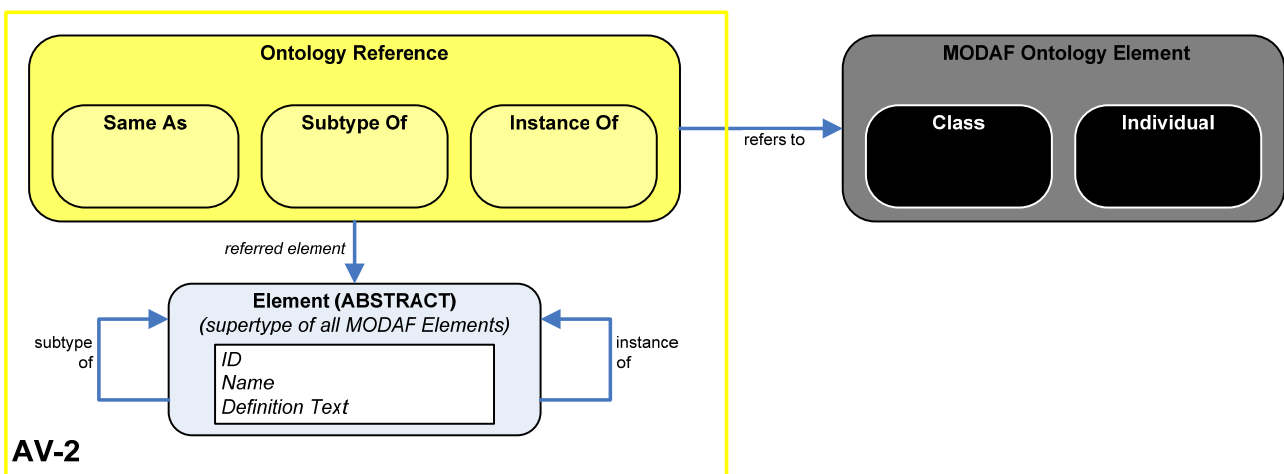
It is, however, essential that organisations within Defence use the same terms to refer to an object. It is MODAF policy that architectures developed using MODAF should use terminology that is aligned with the Defence Terminology which is maintained by the Information Coherence Authority for Defence (ICAD)².

Where new terms are required, usually when the architecture is covering new technology or business processes, they should be unambiguous and be supported by a description and provenance information.

Data objects

The data in an AV-2 can include:

- References to IDEAS³ Ontologies.
- Specialisation Relationships (Subtyping).
- Type-Instance Relationships.



Relationships between Key Data Objects (Simplified from M3)

² See Joint Services Publication 329, Chapter 5 for further guidance.

³ Five-nation standards group "International Defence Enterprise Architecture Specification."

Detailed Product Description

Each entry in an Integrated Dictionary should display the following properties:

- The name used for this element in the architecture.
- Alternative names for this element.
- A brief description of the element.
- A list of the views in which the element is used.

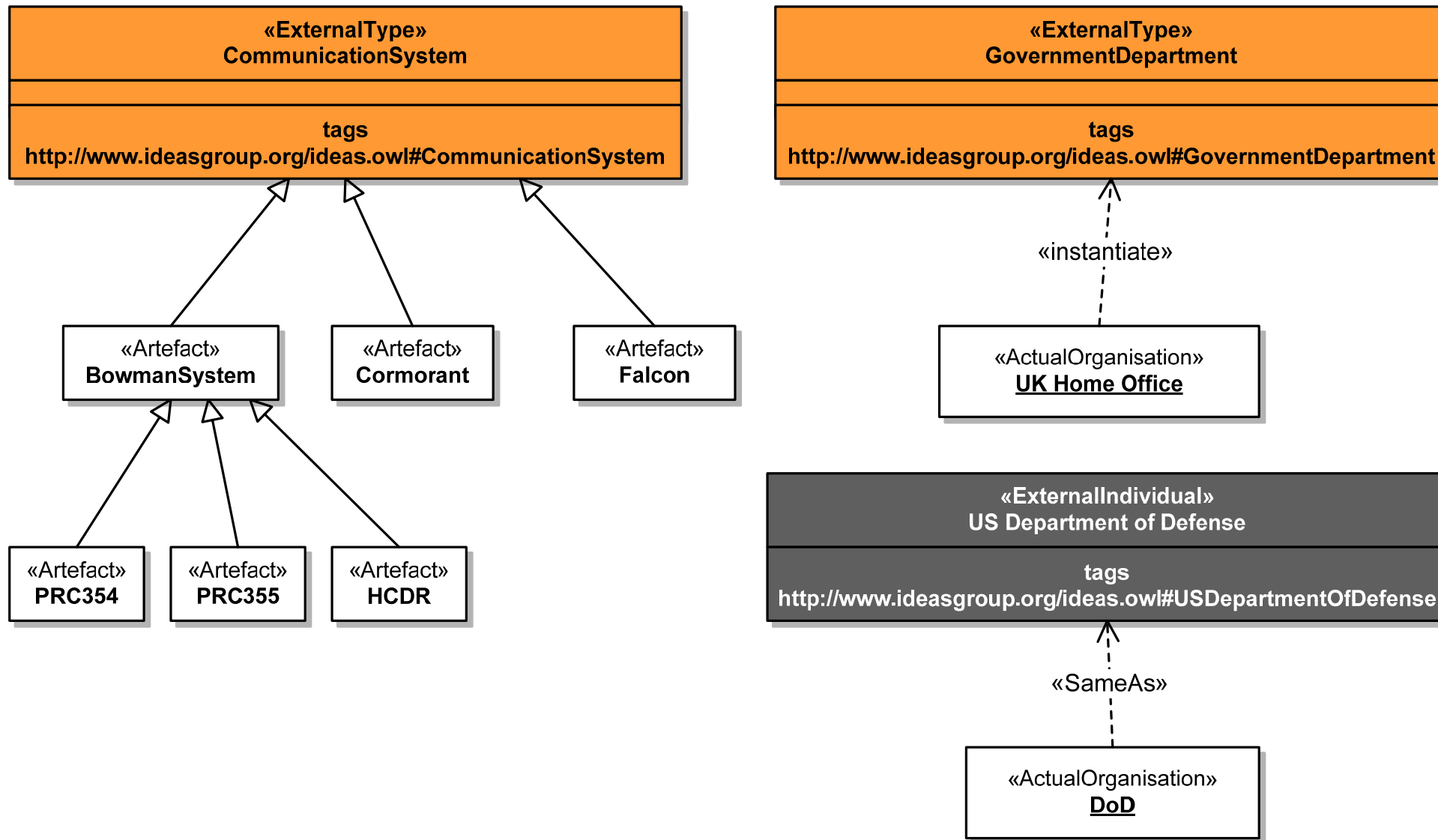
An AV-2 is structured using two types of hierarchical relationship between elements: sub-supertype and type-instance. A sub-supertype relationship is a relationship between two classes with the second being a pure specialisation of the first. A type-instance relationship is a relationship between a class and an instance that is a member (instance) of that class. Note that classes may be members of other classes (eg the class, “Colonel” is a member of the class, “Rank”).

Care should be taken when using these relationships to structure the AV-2 dictionary.

The figure below and the one on the following page show actual examples.

Category	Unique ID	Local Name	Description	Sub
Class	http://www.ideasgroup.org/ideas.owl#CommunicationSystem	Comms System	A system which enables spatially separated parties to communicate	
Class	http://www.ideasgroup.org/ideas.owl#Government Department	Govt Dept	An organization that is an executive body of a national government	
Individual	http://www.ideasgroup.org/ideas.owl#USDepartmentOfDefense	DoD	The federal department responsible for defence of the United States of America	
Class	BowmanSystem	Bowman System	A communications system that is part of the UK Bowman family of land radio	

Example of a Tabular AV-2



Example of a Graphical AV-2