

# MINISTRY OF DEFENCE



## MOD Architectural Framework

### White Paper on Technical View 1 (TV-1): *Technical Standards Profile*

Draft 0.4  
22 March 2005

Prepared by:-

**MODAF**  
partners

Approved by:-

THIS DOCUMENT IS THE PROPERTY OF HER BRITANNIC MAJESTY'S GOVERNMENT, and is issued for the information of such persons only as need to know its contents in the course of their official duties. Any person finding this document should hand it to a British Forces unit or to a Police Station for its safe return to the SECURITY OFFICE, DEFENCE PROCUREMENT AGENCY, ABBEY WOOD, BRISTOL, BS34 8JH, with details of how and when found. THE UNAUTHORISED RETENTION OR DESTRUCTION OF THIS DOCUMENT MAY BE AN OFFENCE UNDER THE UNITED KINGDOM OFFICIAL SECRETS ACT OF 1911-89.

## RECORD OF CHANGES

This page will be updated and re-issued with each amendment. It provides an authorisation for the amendment and a checklist to the current amendment number.

<b>Issue No.</b>	<b>Date</b>	<b>Revision Details</b>
Draft 0.1	25 November 2004	First draft for review
Draft 0.2	17 January 2005	Revisions following review
Draft 0.3	27 January 2005	Revision prior to release
Draft 0.4	22 March 2005	References to NEC removed, and emphasis added to reflect that MODAF does not set standards or policy

## Introduction

*The purpose of this paper is to describe the initial content and layout of the Technical Standards Profile (TV-1) view in a way, which would allow peer review from stakeholders. With the exception of this section, the rest of the paper follows the layout of the DODAF volume II document. The intention is that this format will be retained and used in the final MODAF documentation, currently scheduled for publication in July 2005.*

The MOD Architecture Framework (MODAF) is being developed with the intention of providing a rigorous way to specify systems of systems, and is a key enabler to NEC<sup>1</sup>. The framework will predominantly be used for acquisition purposes, and a key driver for its adoption is the need to improve interoperability between systems. However, the MODAF could equally well be used to analyse existing, operational systems and better enable their integration with other systems (both new and existing).

An architectural framework defines a set of key business and technical information for describing a system of systems architecture. The purpose of an architectural framework is to define the operational context (organizations, locations, processes, information flows, etc.), the system architecture (interfaces, data specifications, protocols, etc.), and the supporting standards and documents that are necessary to describe the system of systems. The information presented in an architectural framework is split into logical groupings – usually known as views. The same system and business elements may be present in more than one view, but the purpose of each view is different and so each provides a different viewpoint on the information.

The most mature and widely adopted architectural framework in the defence industry is the US DoD Architectural Framework (DoDAF). This framework has its origins in the C4ISR community and is seen as a fundamental part of the DoD's drive towards Network Centric Warfare. The MODAF is to be based on the DoDAF specification, and will use many of the aspects of DoDAF without alteration. MODAF will also add a number of new views needed to support MOD-specific processes and structures. In addition, other views will be modified, based on lessons learned by users of DoDAF.

The *Technical Standards Profile* (TV-1) view is one of the modified Technical views that MODAF adds to the base DODAF standard. The purpose of the TV-1 view is to collate the various systems, standards and rules that implement and constrain the choices that can be made in the design and implementation of an architectural framework.

---

<sup>1</sup> CM(IS) NEC Next Steps paper of April 2003

# Technical Standards Profile (TV-1)

## Technical Standards Profile (TV-1) – Product Description

**Product Definition** - The *Technical Standards Profile* (TV-1) collates the various systems, Standards and rules that implement and constrain the choices that can be made in the design and implementation of an architectural framework.

**Product Purpose** - The TV-1 view delineates the Systems, Standards and Rules that apply to architectural implementations. When the Standards Profile is linked to the System elements to which they apply, the TV-1 view serves as the bridge between the SV and TV views.

**Product Detailed Description** - The TV-1 view consists of the set of Systems, Standards, and Rules that govern systems implementation and operation of that architecture. MODAF does not set or impose new or revised Standards; it simply represents the extant Standards, Rules, Doctrine and Policies in a coherent manner.

The technical standards govern what hardware and software may be implemented and on what system. Identified standards may require tailoring to fulfill the needs of the system being represented within the architectural framework; this tailoring is called creating a Standards Profile.

Standards Profiles for a particular architecture must maintain full compatibility with the root standards they have been derived from. In addition, the TV-1 view may state a particular method of implementation for a Standard, as compliance with a Standard does not ensure interoperability. The Standards cited are referenced as relationships to the systems, system functions, system data, hardware/software items or communication protocols in SV-1, SV-2, SV-4, SV-6, OV-7, and SV-11 products, where applicable. That is, each standard listed in the profile should be associated with the SV elements that implement or use the standard (e.g., SV-1, SV-2, SV-4, SV-6, OV-7 and SV-11 element standards, where applicable).

Service Area	Service	System Elements	Standard / Policy
Transport Services	TCP/IP	BOWMAN	IP v6
Data transfer	Data compression algorithms	CRYPTO	JSP XXX ISO XXX
Operating System	Microsoft Windows	JOP	JSP XXX ISO XXX
Deployment	Physical Activity	HQ Equipment	SOP A10

**Figure 1:** An example of the TV-1 view

## **Taxonomies**

The MODAF Taxonomy is to be developed in a related project in conjunction with the communities of interest. The Integration Authority is coordinating current work and subsequent ownership will rest with DG Info.

## **UML Representation**

There is no readily applicable representation of the TV-1 view in UML.

## **ERM Support for TV-1**

At the time of writing this paper, the MOD's conceptual Enterprise Reference Model (ERM) has not been fully mapped to a logical implementation model for MODAF. Therefore to avoid confusion the Data Model and Definitions section of this paper has been removed. See the IA white paper on Implementing the ERM - IA/02/16-ERMcm02

The MODAF Partners are currently engaged with the Integration Authority in the development of a model based on the ERM that will support data exchange in the XMI format between MODAF compliant tools. When the logical model mapping has been completed (~March '05) this white paper will be re-issued with the model included.

### **MODAF Partners**

This document has been prepared by MODAF partners with contributions from David Mawby (PA Consulting Group), Fariba Hozhabrafkan (Cornwell Associates), Ian Bailey (Cornwell Associates), and David Pile (PA Consulting Group)