### A SUMMARY OF MODAF VIEWS BY THEIR USE AND DATA TYPES

This document provides a summary of the MODAF viewpoints; for each viewpoint, it lists the uses for that viewpoint and the data objects which each

		r	-							-				viewpoint contains.
								CATE	GORY					View Categories
		Tabu	ular	Struc	tural	Behavi	oural	Марр	oing	Onto	logy	Pictorial	Timeli	ne <b>Tabular:</b> Views which are essentially
	All Views	AV-1	Link							AV-2	Link			special case <i>Structural</i> : This category
	Strategic	StV-1	Link	StV-4	Link			StV-3	Link	StV-2	Link			comprises diagrams describing the
	Ū							StV-5	Link					structural aspects of an Architecture.
														diagrams describing the
								StV-6	Link					behavioural aspects of an Architecture.
	Operational	OV-1b	Link	OV-2	Link	OV-5	Link					OV-1a <u>Link</u>		Mapping: These views provide matrix (or
		OV-1c	<u>Link</u>	OV-4	Link	OV-6a	<u>Link</u>							similar) mappings between two different
			1 Sector	01/7	1 Sector		1.1.1.							Ontology: Views which extend the
		00-3	LINK	00-7	LINK	00-60	<u>Link</u>							MODAF ontology for a particular
F						OV-6c	<u>Link</u>							Architecture.
NO	System	SV-6	Link	SV-1	Link	SV-4	Link	SV-3	Link				SV-8	<b>Pictorial:</b> This category comprises just
۷P	Oystelli	SV-7	Link	SV-2a	Link	SV-10a	Link	SV-5	Link					essentially a free-form picture.
Ē		SV-9	Link	SV-2h	Link	SV-10b	Link	SV-12	Link					Timeline: This category comprises
>		50-5		SV 20	Link	SV 100	Link	50-12						diagrams describing the programmatic
				SV-20	Link	50-100								aspects of an Architecture.
				30-11										
	Technical	T\/_1	Link											
	Technical	TV-7	Link											
		1 V-2									<u> </u>			
	Acquisition			AcV-1	Link								AcV-2	Link Clicking on the "link" takes you to the
	Service Oriented	SOV-2	<u>Link</u>			SOV-4a	<u>Link</u>	SOV-3	<u>Link</u>	SOV-1	<u>Link</u>			summary of the view.
						SOV-4b	<u>Link</u>							<u>All Views Viewpoint (AV)</u>
						SOV-4c	Link							An overarching description of the
						SOV-5	Link							architecture, its scope, ownership,
														timeframe and all of the other meta

data that is required in order to effectively search and query architectural models.

AV View	Used for	Data objects	
<u>AV-1</u>	Scoping the project.	• Scope	
Overview &	Providing context to the project.	Purpose	
Summary	Definition of an architecture-based task.	Listing of views used	
Information	Summarising the findings from an architecture-based task.		Back
	Assisting search within an architecture repository.		to
			table
<u>AV-2</u>	• AV-2 presents all the Elements used in an architecture as a stand alone structure. An AV-2	Ontology References	
Integrated	and references the source of the element (e.g. MODAF Ontology, IDEAS Model, local, etc.).	<ul> <li>Specialisation Relationships (Subtyping)</li> </ul>	
Dictionary	• An AV 2 shows elements from the MODAE Ontology that have been used in the architecture	Type-Instance Relationships	
	and new elements (i.e. not in the MODAF Ontology) that have been used in the architecture		Back
	architecture.		table

# Strategic Viewpoint (SV)

These views support to the process of analysing and optimising the delivery of military capability in line with the MOD's strategic intent.

StV View	Used for	Data objects	
<u>StV-1</u>	Communication of strategic vision regarding capability evolution	Enterprise Vision	
Enterprise Vision		Enterprise Phase	
		Enterprise Goals	
		Capability	Bac
		Enduring Task	<u>to</u>
			tabl
StV View	Used for	Data objects	

StV-2	Identification of capability requirements	Capability	
Capability	Capability planning (capability taxonomy)	Capability Specialisation (relationship between	
Taxonomy	Codifying required capability elements	capabilities)	
	Capability audit	Enterprise Phase	
	Capability gap analysis		
	Source for the derivation of cohesive sets of KUR		
	Providing reference capabilities for architectures		Deals
			back to
<u>StV-3</u>	Capability planning (capability phasing)	Capability	table
Capability	Capability integration planning	Capability Configuration	
Phasing	Capability gap analysis	Capability Increment (Project Milestone)	
		Out of Service (Project Milestone)	
		Enterprise Phase	Back
			to
<u>StV-4</u>	Identification of capability dependencies	• Capability	table
Capability	Capability management (impact analysis for options, disposal etc)	Capability Dependency (relationship)	
Dependencies		Capability Composition (relationship)	Back
<u>StV-5</u>	Fielding planning	Capability	table
Capability to	Capability integration planning	Capability Configuration	
Organisation	Capability options analysis	Resource Interaction (between Capability	
Deployment	Capability redundancy/overlap/gap analysis	Configurations or their components)	
Mapping	Identification of deployment level shortfalls	Actual Organisational Resource (Actual Post, Actual Organisation)	
		Capability Delivery (Project Milestone)	
		Capability No Longer Used (Project Milestone)	Back
StV1 C	. Tracing conchility requirements to and using tools	- Conchility	toblo
<u>5tv-0</u>	Conshility audit	Capability     Standard Operational Activity	lable
Operational Activity to			
Capability			Pack
Mapping			back to
			table

Operational Viewpoint (OV)

These views describe a requirement for a to-be architecture in logical terms, or as a simplified description of the key behavioural and information aspects of an as-is architecture.

OV View	Used for	Data objects	
<u>OV-1a</u>	Puts an operational situation or scenario into context	Operational Nodes i.e. Headquarters	
High-Level	• Provides a tool for discussion and presentation; for example, aids industry engagement in	Systems i.e. aircraft	
Operational	acquisition	Organisations	
Concept Graphic	Can provide a common way in to more detailed information in published architectures	Information Flows	Back
		Environmental context objects i.e. rivers, hills	<u>to</u> table
<u>OV-1b</u>	Concept of Operations	OV-1b is a textual description of the OV-1a graphic so does	
Operational	Input to URD	not usually have specific data objects associated with it.	Back
Concept			<u>to</u>
Description			table
<u>OV-1c</u>	Definition of performance characteristics.	Metrics associated with performance associated with	
Operational	• Measures of Effectiveness (input to URD).	Specific concepts within the scenario specified within the	Back
Attributes		00010.	table
OV-2	Definition of operational concepts.	Nodes ("Operational Nodes").	
Operational	Elaboration of capability requirements.	Needlines (bundles of information exchanges).	
Node	Definition of collaboration needs.	Logical Flows (of materiel, people or energy).	
Relationship	'Localising' capability.	Operational Activities.	
Description	Problem space definition.	Locations.	
	Operational planning.		Back
	Supply chain analysis.		to
			<u>table</u>
<u>OV-3</u>	Definition of interoperability requirements	Information Exchanges (each associated with a Needline)	
Operational		Information Elements (each carried by one or more	
Information		Information Exchange)	
Exchange Matrix			4
OV View	Used for	Data objects	

<u>OV-4</u>	A typical OV-4 may be used for:	Organisation Types	
Organisational	Organisational analysis	Resource Composition relationships	
Relationships	Definition of human roles	Resource Interaction relationships	
Chart	Operational analysis	Post Types	
		Role Types	
	An <b>actual</b> $OV-4$ may be used to:	Actual Posts and Organisations	
		Competences	
	Identify process owners		
	Illustrate current or future organisation structures		Deal
			Back
<u>OV-5</u>	Description of business processes and workflows.	Operational activities.	table
Operational	Requirements capture (input to URD). • Definition of roles and responsibilities.	Standard operational activities (originating in StV-6).	
Activity Model	Support task analysis to determine training needs.	Operational Activity Flow Objects	
	Problem space definition.	Swimlanes (each associated with a node).	
	Operational planning.		
	Logistic support analysis.		
	Information flow analysis.		
			L .
			Back
<u>OV-6a</u>	Definition of doctrinally correct operational procedures	Operational constraints	table
Operational	Definition of business rules		
Rules Model	Identification of operational constraints		Back
OV-6b	Analysis of business events	States (each associated with a mission, node or	<u>to</u>
Operational	Behavioural analysis.	operational activity.)	table
State Transition	Identification of constraints (input to SRD).	State transitions (each associated with an event).	
Description			Back
OV-6c	Analysis of operational events.	Lifelines (each associated with a Node).	<u>to</u>
Operational	Behavioural analysis.		table
Event-Trace	Identification of non-functional user requirements (input to URD).		
Description	Operational test scenarios.		
0)/7			Back
<u>0v-7</u>	Information architecture.	Operational Information Entity.	table
Information	Information product hierarchy.		
Model			4

#### Back to table

# System Views

Describe the resources that realise capability.

SV View	Used for	Data objects	1
<u>SV-1</u>	Definition of system concepts	Artefact	
Resource	Definition of system options	Organisation Type	
Interaction	Interface requirements capture	Post Type	
Specification	Capability integration planning	Role Type	
	System integration management	Software	
	Operational planning (capability configuration definition)	Capability Configuration	
		Resource Composition	Back
		Resource Interaction	to
			table
<u>SV-2a</u>	Interface specification	System	
System Port	Identification of applicable protocols	System Port	Back
Specification	Description of system communication paths	Protocol	table
SV-2b		System	
System Port		System port	
Connectivity		Port connection	Back
Description		Protocol	to
			table
<u>SV-2c</u>	Interface specification.	Physical asset.	
System	Bandwidth and capacity analysis.	Organisational resource (post type or organisation type).	
Connectivity		• System.	
Clusters		System port.	Back
		System port connection.	table
SV-3	Summarising resource interactions.	Resource types.	
Resource	Interface (ICD) management.	Resource interactions.	Back
Interaction Matrix	Comparing interoperability characteristics of solution options.		table
SV-4	Description of task workflow	Eunction	
<u>Eunctionality</u>	Identification of functional system requirements	Resource	
Description	Eunctional decomposition of systems.	Data Element	Back
	Relate human and system functions.		to
			table
SV View	Used for	Data objects	

<u>SV-5</u>	Tracing functional system requirements to user requirements.	Function.	
Function to	Tracing solution options to requirements.	Resource.	
Operational	Identification of overlaps.	Operational activity.	
Activity / Service		Service function.	
Traceability Matrix			Back
SV-6	Detailed definition of data flows	System	to
Systems Data		Resource interaction	table
Exchange Matrix		System port connector	
<b>J</b>		Data element	
		<ul> <li>Information exchange (OV-2)</li> </ul>	
			Back
<u>SV-7</u>	Definition of performance characteristics.	Resource (system, role, or capability configuration).	toblo
Resource	<ul> <li>Identification of non-functional requirements (input to SRD).</li> </ul>	Measurable property.	lable
Performance		Qualitative property.	
Parameters Matrix			Back
<u>SV-8</u>	Development of incremental acquisition strategy.	Capability configurations.	table
Capability	Planning technology insertion.	Resources that are parts of capability configurations.	
Configuration		<ul> <li>Project milestone (reflecting capability delivery).</li> </ul>	Deals
Management			Back
<u>SV-9</u>	Forecasting technology readiness against time.	Resources.	table
Technology &	• HR trends analysis.	Competences.	
Skills Forecast	Recruitment panning.	Standards.	
	Planning technology insertion.	<ul> <li>Forecasts (for the any of the above).</li> </ul>	
	Input to options analysis.		Book
SV-102	Definition of implementation logic	. Deseures constraint	to
<u>SV-IUa</u>	Identification of resource constraints	• Resource constraint.	table
Constraints			
Specification			Back
SV-10b	Definition of states, events and state transitions (behavioural modelling).	Resources.	to
Resource State	<ul> <li>Identification of constraints (input to System Requirements Document).</li> </ul>	States (associated with a resource or function).	table
Transition		State transitions (each associated with an event).	
Description			Back
to table			

SV View	Used for	Data objects	
SV-10c Resource EventTrace	<ul> <li>Analysis of resource events impacting operation.</li> <li>Behavioural analysis.</li> <li>Identification of non-functional system requirements (input to System Requirement</li> </ul>	<ul> <li>Lifelines (each associated with a functional resource or a system port).</li> </ul>	Back
	Document).		table
<u>SV-11</u> Physical Schema	<ul> <li>Specifying the system data elements exchanged between systems, thus reducing the risk of interoperability errors.</li> </ul>	System data entity.	Back
	Definition of physical data structure (input to system design).		<u>table</u>
<u>SV-12</u>	Service implementation.	Service.	
Service Provision	Resource audit.	Resource type	Back
	<ul> <li>Tracing business processes to the resources that support them.</li> </ul>		table

### Technical Standards Viewpoint (TV)

Standards, rules, policy and guidance that are applicable to aspects of the architecture.

TV View	Used for	Data objects	
<u>TV-1</u>	Application of standards (informing project strategy)	Standard	
Standards Profile	Standards compliance	Protocol	Back to table
TV-2 Standards Forecast	Forecasting future changes in standards (informing project strategy)	Standard (evolution over time)	<u>Back</u> <u>to</u> table

# Acquisition Viewpoint (AV)

Describe programmatic details, including dependencies between projects and capability integration across the Defence Lines of Development (DLODs).

AcV View	Used for	Data objects	
<u>AcV-1</u>	Programme management (specified acquisition programme structure)	Project	
Acquisition	Project organisation	Project Owner	Back
Clusters		Enterprise Phase	<u>to</u> table
<u>AcV-2</u>	Project management and control (including delivery timescales)	Projects	
Programme	Project dependency risk identification	Project Milestones	
Timelines	Management of dependencies within a System of Systems (including all Lines of	Threads (e.g. DLOD)	
	Development)	Project Dependencies	
	Portfolio management (for System of Systems acquisition)	Capability Configurations	Back
	Through Life Management Planning (TLMP)		to
			table

### Service Oriented Views

Specify Services that are to be used in a Service-Orientated Architecture (SOA).

View	Used for	Data objects	
<u>SOV-1</u>	SOA Governance	Service	
Service	Identification of Services	Service Generalisation (the specialisation relationship)	
Taxonomy	Service Planning	Service Attribute	
	Service Audit	Service Policy (optional, also shown in SOV-3)	
	Service gap analysis		
	Providing reference services for architectures		Back
	Tailoring generic services for specific applications		to
			table
View	Used for	Data objects	
SOV-2	SOA Governance	Service (Operational, Information and Application Service)	
Service Interface	Detailed Service Specification	Service Interface	
Specification	Service Interoperability	Service Interface Operation	
		Service Interface Parameter	

<u>SOV-3</u>	Service specification & planning	Service (Operational, Information and Application Service)	
Capability to	Governance	Capability	
Service Mapping		Service Aims to Achieve (relationship from Service to Capability)	lack
<u>SOV-4a</u>	Service Specification	Service (Operational, Information and Application Service)	to
Service Constraints	Service Governance	Service Policy	<u> </u>
SOV-4b	Service Specification	Service (Operational, Information and Application Service)	ack
Service State Model		Service State Machine <u>tal</u>	<u>to</u> ble
SOV-4c	Service Specification	Service(Operational, Information and Application Service)	ack
Service		Service Interface	to
Interaction		Service Lifeline	ole
Specification		Service Consumer	ack
<u>SOV-5</u>	Service Specification	Service(Operational, Information and Application Service)     tal	ble
Service Functionality	Functional Requirements Definition	Service Function	_
		B	ack

table

table

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