

SV-9, Technology Forecast, informs the IPT of new technology that may become available in the short-, medium- and long-term. If new technology is due to become available during the lifetime of the acquisition process, this will need to be considered as an option. The technology forecast also helps the IPT to avoid technology and system options that would be obsolete by the time the system is put into service

JTA Service		SHORT TERM (0-6 Months)	MID TERM (6-12 Months)	LONG TERM
TECHNOLOGY FORECASTS				
Application Software				
Support Applications	Microsoft Office 2000 available for Windows (2000)	Microsoft Office 2000 stable enough for full-scale implementation	E-mail on wireless PDAs commonplace	
Data Management	Oracle 9i available			
Operating System	Next MS Windows desktop upgrade expected	Next MS Windows server upgrade expected		
Physical Environment	Next Red Hat Linux major release expected			
				Intel IA-64 becomes standard processor for desktop technologies
External Environment				
User Interface	This screen CRT monitors for PC desktops become price competitive	Thin screen LED monitors become conventional CRT technology		
Persistent Storage	5G PCMCIA type 2 card available			Disk storage capacity doubles again
Communications Networks				Cable modem service available for most telecommuting staff
				Fiber optic connections available for most telecommuting staff

Desktops may need upgrade in the long term to take advantage of new processors

SV-9

1 Identify Options – Forecast Information

2 MODAF Reference Guide MODAF-M10-009 Systems / Technology Acquisition Workstream

Prerequisites	1. Establish Intended Use	2. Define Architecture Scope	3. Develop Data Requirements	4. Capture Architecture	5. Conduct Analyses	6. Document Results
MODAF Governance		Inform Central Reg.	Query of Avail. Data Sources	Provide Extant Arch. Data	Publish Baseline to MODAR	Publish Final Arch. to MODAR
MODAF Users	User training - MODAF principles Workshop - Determine Architecture Usage	Workshop - Bound Architecture Scope Workshop - Determine Use Cases Plan of Time & Resources	Workshop - Establish Data Needs Data Gathering Plan Tool Selection	Tool-specific Training Baseline Arch. Review	Analysis Review Initial Analysis Final Analysis	Finalised Arch. Review Finalised Architecture
MODAF Resources	MODAF Baseline MODAF Training Material MODAF Tiger Teams MODAF Help Desk	MODAF Tiger Teams MODAF Help Desk Hybrid View Development	MODAF Tiger Teams MODAF Help Desk Certified Tool List Tool Advice	MODAF Tiger Teams MODAF Help Desk MODAF Taxonomy ERM / M3	MODAF Tiger Teams MODAF Help Desk	MODAF Tiger Teams MODAF Help Desk

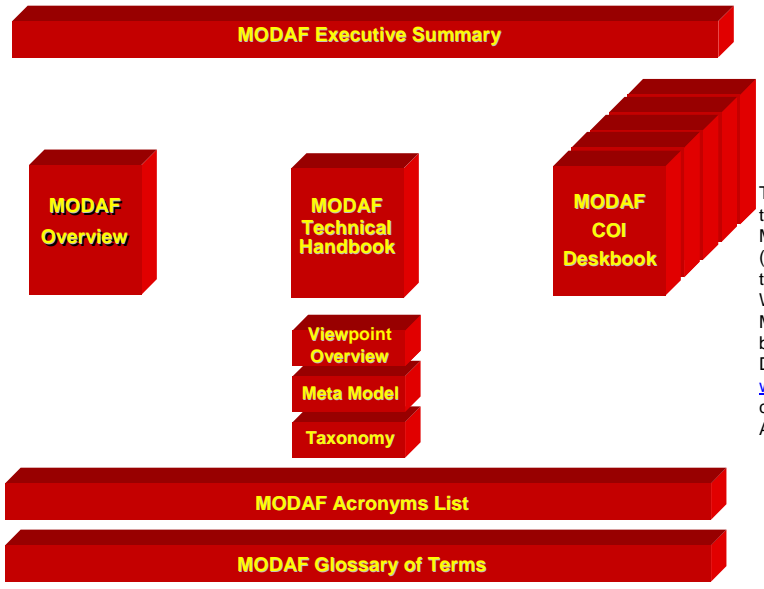
The approach to developing a MODAF-compliant architecture is shown in the diagram above. This shows how a MODAF user within any community in the MOD goes about establishing the intended use, scope and data requirements, developing the architecture, using this to conduct the required analyses and documenting the results. A more detailed description of this six-stage architecture development process is provided in the Overview of MODAF (MODAF-M09-002).

SV-7

System Name		Architecture Time Period	Time, (Target Architecture Time Period)	Performance Range (Threshold and Objective) Measures
Hardware Element 1				
Maintainability				
Availability				
System Initialization Time				
Architecture data Transfer Rate				
Program Restart Time				
Architecture Data Capacity (e.g., throughput or # of input types)				
Automatic Processing Responses (by input type, # processed/unit time)				
Operator Interaction Response Times (by type)				
Availability				
Effectiveness				
Mean Time Between S/W Failures				
Organic Training				
SM Element 2 / HW Element 1				
Hardware Element 2				

8 Identify Options – Requirements

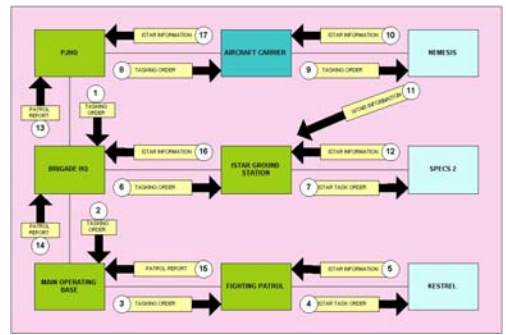
3 MODAF Document Hierarchy



This guide intends to provide the key information about the MOD Architectural Framework (MODAF) Views required for the Systems / Technology Workstream within Acquisition. More detailed information can be found in the Acquisition Deskbook, by referencing www.modaf.com, or by contacting the DPA Integration Authority

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OV-2



Demonstration - Interoperability

SV-6

IER No.	Sender	Receiver	Content	Media	Info Char	Format	Security	Freq	Timeliness	Thruput
1	JFMCC	CVIC	Target ID	JFMCC	Data	J1395	EOV-8	39	xxx	N/A
2	DDO-S1	JFMCC	Track Id	DDS	Stream	CBC data	ET-7	39	xxx	N/A
3	JFMCC	S-2C	Target Order	JFMCC	Data	J1395	EOV-8	15	xxx	N/A
4	S-2C	JFMCC	Track Update	DDS	Stream	CBC data	ET-7	39	xxx	N/A
5	CVIC	FA-18	Target Order	JFMCC	Data	J1395	EOV-8	15	xxx	N/A
6	DDO-S1	CVIC	Target Id	DDS	Stream	CBC data	ET-7	39	xxx	N/A
7	FA-18	CVIC	Target Id	JFMCC	Data	J1395	EOV-8	15	xxx	N/A
8	FA-18	CVIC	Target Id	JFMCC	Data	J1395	EOV-8	15	xxx	N/A
9	S-2C	CVIC	Task Order	JFMCC	Data	J1395	EOV-8	15	xxx	N/A
10	FA-18	CVIC	Target Id	JFMCC	Data	J1395	EOV-8	15	xxx	N/A
11	CVIC	AWACB	Target Id	JFMCC	Data	J1395	EOV-8	15	xxx	N/A
12	CVIC	DDO-S1	Target Id	DDS	Stream	CBC data	ET-7	39	xxx	N/A
13	DDO-S1	CVIC	Target Id	DDS	Stream	CBC data	ET-7	39	xxx	N/A
14	CVIC	AWACB	Task Order	JFMCC	Data	J1395	EOV-8	15	xxx	N/A
15	CVIC	DDO-S1	Target Id	DDS	Stream	CBC data	ET-7	39	xxx	N/A
16	FA-18	JFMCC	Target Id	JFMCC	Data	J1395	EOV-8	15	xxx	N/A
17	FA-18	JFMCC	Target Id	JFMCC	Data	J1395	EOV-8	15	xxx	N/A
18	S-2C	FA-18	Task Order	JFMCC	Data	J1395	EOV-8	15	xxx	N/A
19	FA-18	CVIC	Target Id	JFMCC	Data	J1395	EOV-8	15	xxx	N/A
20	DDO-S1	DDO-S1	Target Id	JFMCC	Data	J1395	EOV-8	15	xxx	N/A

OV-2 Operational Node Connectivity Description and SV-6 Systems Data Exchange Matrix shows how the system will meet the interoperability requirements, to provide an integrated capability

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OV-1c

Attribute	Measure	Value			
		As - Is	Epoch 1	Epoch 2	Target
Operational Tempo	Rate of Advance for an Armoured Brigade against light resistance	20 km/day	40 km/day	60 km/day	80 km/day
Synchronisation of Effects	Simultaneous rounds on impact delivered by an Army Bty	30 rounds	40 rounds	60 rounds	100 rounds
Sortie Rate	Period to re-fuel and re-arm an aircraft	4 hours	3 hours	2 hours	1 hours

Demonstration - Performance

SV-7

System Name	Performance Range (Threshold and Objective) Measures		
	Architecture Time Period	Time	Time (Target Architecture Time Period)
Hardware Element 1			
Management			
Availability			
System Initialization Time			
Architecture Data Transfer Rate			
Program Resident Time			
SW Element 1 / HW Element 1			
Architecture Data Capacity (e.g., throughput or # of input types)			
Automatic Processing Responses (by input type, # processed/second)			
Operator Interaction Response Times (by type)			
Availability			
Effectiveness			
Mean Time Between SW Failures			
Operator Training			
SW Element 2 / HW Element 1			
Hardware Element 2			

OV-1c Operational Performance Parameters and SV-7 System Performance Parameters Matrix show the required operational and system performance to be delivered by the solution

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OV-3

Needline ID	From	To	Content	Medium
1	FJND	BDE HQ	BDE TASKING ORDER	SAT COMM
2	BDE HQ	UN MONITORS	UN MONITORS TASKING ORDER	BOWMAN
3	BDE HQ	GROUND STATION	ISTAR TASKING ORDER	BOWMAN
4	GROUND STATION	KESTREL	KESTREL TASK ORDER	UHF RX/TX
5	KESTREL	GROUND STATION	TACTICAL ISTAR INFO	UHF RX/TX
6	GROUND STATION	BDE HQ	TACTICAL ISTAR INFO	UHF RX/TX
7	KESTREL	UN MONITORS	TACTICAL ISTAR INFO	BOWMAN
8	UN MONITORS	BDE HQ	UPDATES AND REPORTS	BOWMAN
9	BDE HQ	FJND	THEATRE UPDATE	SAT COMM

Demonstration - IERS

SV-1



OV-3 Operational Information Exchange Matrix and SV-1 Systems Interface Description shows the Information Exchange Requirements (IERS), which should be included in the contract, to ensure integration, and how these are being met at a physical connectivity level

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TV-2

TRM CATEGORY	STANDARDS FORECASTS		
	SHORT TERM (1 year)	MID TERM (3 years)	LONG TERM (5 years)
Application Platform			
Data Interchange	Security Marking DTD - in CAPCO coordination (proposed ICS standard)		
Document Interchange			
Mapping	Geography DTD 2.0 - accepted by GIS Consortium	Commercial products that use the standard become available	
	Geospatial XSD - in coordination Open GIS		Geospatial XSD - accepted by Open GIS
Communications		IE TF - RFC 2069 Internet Mail Access Protocol (IMAP) - accepted; replaces de fact standard	
Electronic Mail			
World Wide Web Services	IE TF - Common Gateway Interface (CGI) 1.2 - becomes proposed standard		IE TF - Common Gateway Interface (CGI) 1.2 - accepted; replaces CGI 1.1; de fact de facto standard
			IE TF - RFC 2818 HTTP Over TLS - accepted; replaces RFC 2616
Communications		IE TF - Wireless Extensions to TLS - becomes proposed standard	
Transport Services		IE TF - RFC 2002 IP Mobility Support - accepted	IE TF - IPv4 Mobile IP Protocol - becomes proposed standard
Security			IE TF - RFC 2246 The Transport Layer Security (TLS) Protocol Version 1.0 - accepted; replaces SSL

Technology Insertion

SV-9

JTA Review	TECHNOLOGY FORECASTS		
	SHORT TERM (1-2 years)	MID TERM (3-5 years)	LONG TERM (5+ years)
Application Platform			
Internet Applications	Microsoft Office 2000 available (for Windows 2000)	Microsoft Office 2002 stable enough for full-scale implementation	Microsoft Office available for Linux
Data Management	Oracle 9i available; MySQL, Open Source DBMS available		
Operating System	Next OS releases being rapidly accepted	Next OS releases being rapidly accepted	Next OS releases being rapidly accepted
Physical Environment			Next OS releases being rapidly accepted
External Environment			
User Interface	The screen CRT monitors for PC desktops become price competitive	The screen LED monitors become price competitive for desktops	The screen LED monitors become price competitive for desktops
Persistent Storage	50 GB SATA type of hard available	1 TB SATA type of hard available	1 TB SATA type of hard available
Communications Networks			1 TB SATA type of hard available

Desktops may need upgrade in the long term to take advantage of new processes

Once the system is in the In-Service Stage, the technology evolution and evolving standards may drive obsolescence of system elements. The TLMP will be updated using inputs from the SV-9 and TV-2 to reflect this changing technology landscape, and upgrades, improvements or replacement initiated as needed