

FORCEnet Integrated Architecture Governance

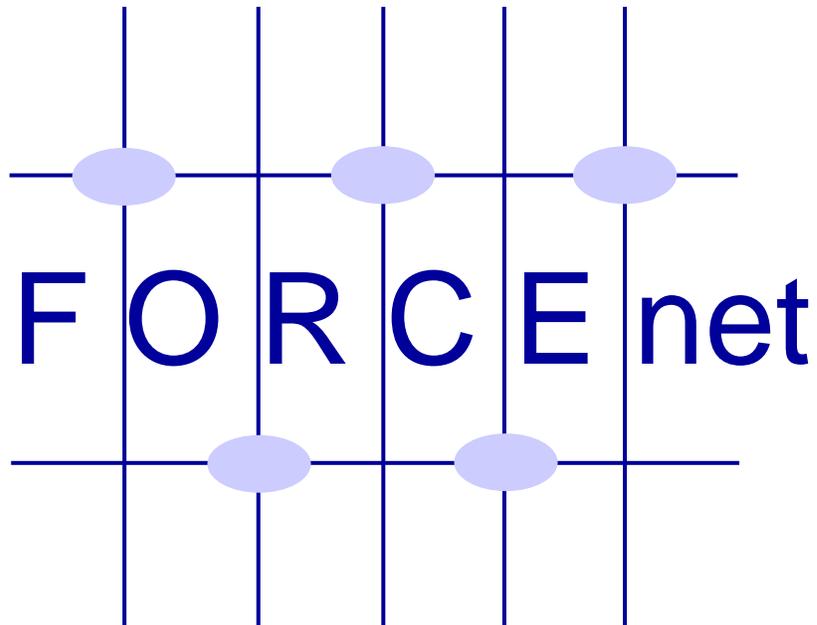


Table of Contents

1. Introduction.....	1
1.1 Background.....	1
1.2 Purpose.....	1
1.3 Document Administration.....	1
2. FORCEnet Architecture Governance Organization.....	2
2.1 FORCEnet Integrated Architecture Verification Board	2
2.2 FORCEnet Integrated Architecture Integration Board	3
2.3 FORCEnet Integrated Architecture Integration Agent	4
2.4 FORCEnet Operational View Team	4
2.5 FORCEnet Systems/Technical View Team.....	4
2.6 DoN CIO and ASN (RDA) CHENG Architecture Guidance.....	4
2.7 Joint Forces Command (JFCOM).....	5
2.8 Service Headquarters	5
2.9 Service Authority	5
3. FORCEnet Architecture Governance Process	6
3.1 High-Level Guidance.....	7
3.2 Architecture View Development	7
3.3 FORCEnet Architecture Integration	7
3.4 Architecture Verification	8
3.5 Architecture Iteration	9
Appendix A – List of Acronyms.....	A

1. INTRODUCTION

1.1 BACKGROUND

The Department of the Navy (DoN) has no organizational structure or process to govern the development, verification or approval of DoD Architecture Framework (DoDAF) related architectures that apply across the naval community. The FORCENet Integrated Architecture is the first naval enterprise level architecture that will guide multiple programs of record (POR). COMNAVNETWARCOM NORFOLK VA 012034ZSEP04 established FORCENet Naval Roles and Responsibilities, making several organizations responsible for development of various portions of an integrated architecture for FORCENet. This necessitated the formation of a governance structure and process for the development and verification of the enterprise architecture. COMNAVNETWARCOM NORFOLK VA 081637Z AUG 05 established the initial version of this document and the governance process. The FORCENet Integrated Architecture and related architectures will provide an integrated expression of approved functional concepts, concept of operations, associated operational capabilities in an integrated architecture, vice a statement of funded programmatic requirements. It will serve to inform decision makers, not direct programmatic decisions.

1.2 PURPOSE

The FORCENet Integrated Architecture Governance document will serve as guidance for the governance of the FORCENet Integrated Architecture until a DoN Enterprise Architecture (EA) governance process is established. The FORCENet Integrated Architecture is being developed at a high level to provide continuity from the required operational capabilities to the physical POR in the domain of FORCENet. The detailed purposes of the FORCENet Integrated Architecture are discussed in the FORCENet Integrated Architecture Overview and Summary document (AV-1). To support standards and policy compliancy, organizations developing DoDAF architecture products will receive guidance from the FORCENet Integrated Architecture for development of architectures for their POR as required to support the Joint Capabilities Integration and Development System (JCIDS) documents or for other purposes.

Section 2 explains the organizational structure involved in the governance of the FORCENet Integrated Architecture. Section 3 explains the FORCENet Integrated Architecture governance process, including the process for handling Service specific (i.e. Navy or Marine Corps) architecture Verification Board meetings.

1.3 DOCUMENT ADMINISTRATION

The FORCENet Integrated Architecture Governance and related documents will be posted at <http://forcenet.navy.mil/> under the architecture tab. Questions relating to the content and administration of this document should be forwarded to the Naval Network Warfare Command (NETWARCOM), via email at LTLC_NNWCArchit@navy.mil. The document will be reviewed and updated at least annually.

2. FORCENET ARCHITECTURE GOVERNANCE ORGANIZATION

Figure 1 shows the overall FORCENet architecture governance organization. The organizations in each group are described below. The governance process used by this organization structure is described in section 3. The architecture development process and schedule for delivery of architecture products are described in the FORCENet Integrated Architecture Overview and Summary (AV-1) document.

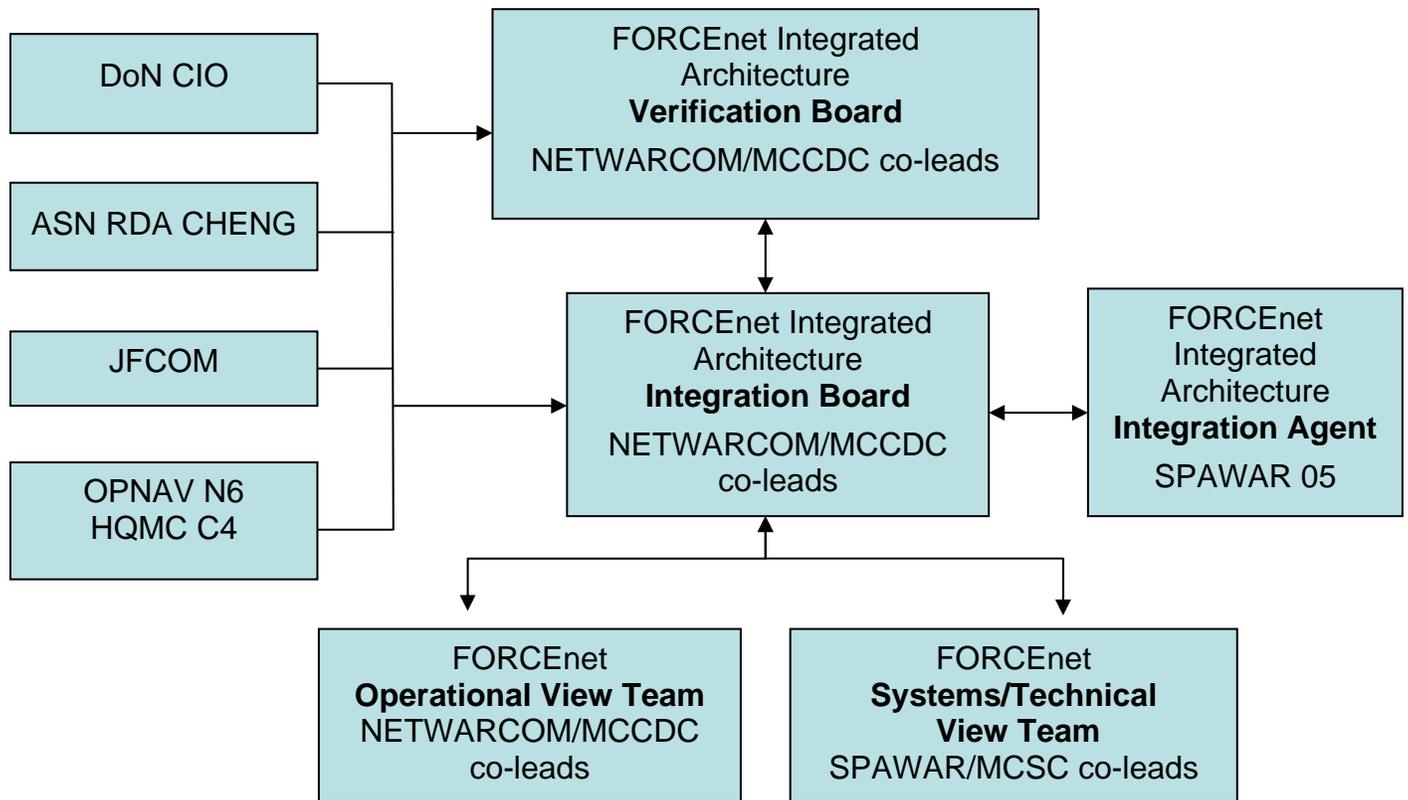


Figure 1 - FORCENet Architecture Governance Organization

2.1 FORCENET INTEGRATED ARCHITECTURE VERIFICATION BOARD

The Verification Board is co-led by an O-6/GS-15 level representative from NETWARCOM and the Marine Corps Combat Development Command (MCCDC). Working level membership includes a variety of Navy and Marine Corps organizations. Participants include representatives from:

- NETWARCOM and MCCDC – Ensures that overall Navy and Marine Corps warfighting and enterprise requirements are adequately addressed.
- Space and Naval Warfare Systems Command (SPAWAR) 05 – Ensures Navy systems and technical requirements are addressed.

- Marine Corps Systems Command (MCSC) – Ensures Marine Corps systems and technical requirements are addressed.
- Navy Warfare Development Command (NWDC) – Ensures that Navy warfare concepts and doctrine (as appropriate) are addressed. MCCDC will perform this function for Marine Corps organizations.
- Office of Naval Research (ONR) – Ensures that future technology and research and development trends are addressed.
- Deputy Commandant for Aviation (DC, Aviation) – Ensures that the Marine Corps requirements of Sea Shield and Sea Strike placed upon FORCENet are addressed.
- Office of the Chief of Naval Operations (OPNAV) N20, N61, N6F and N81F – Ensures Navy Architecture Policy, Human Systems Integration (HSI), Intelligence, Surveillance and Reconnaissance (ISR), networks and communications, budgetary and resource sponsor considerations are addressed.
- Deputy Commandant, Plans, Policies, and Operations (PP&O) – Ensures the Marine Corps requirements for the Ground Combat Element (GCE) are specifically addressed. More generally, PP&O will also advocate for the requirements of the Marine Air Ground Task Force (MAGTF) as a whole.
- Deputy Commandant, Installations and Logistics (I&L) – Ensures the Marine Corps functional and logistical requirements are addressed.
- Deputy Commandant, Programs and Resources (DC, P&R) – Ensures the Marine Corps programmatic and fiscal considerations are addressed.
- Director C4 and Director Intelligence Department, Headquarters Marine Corps (HQMC) – Ensures that the Marine Corps requirements for C4 and Intelligence respectively are addressed.
- Department of the Navy Chief Information Officer (DoN CIO) – Ensures DoN guidelines for the Federal, Global Information Grid (GIG) / Business Enterprise Architecture (BEA), Clinger-Cohen processes are properly followed.
- Assistant Secretary of the Navy (Research, Development and Acquisition) Chief Engineer (ASN (RDA) CHENG) – As the representative for the naval acquisition community, ensures the acquisition community’s interests are adequately addressed.

2.2 FORCENET INTEGRATED ARCHITECTURE INTEGRATION BOARD

The lead architects at NETWARCOM and MCCDC will serve as co-chairs for the Integration Board. The Integration Board will be formed from the leadership of the Operational View (OV) and Systems View (SV) /Technical View (TV) Teams, and will primarily work to ensure integration between the OV and SV/TV Teams and their processes. Participants from the organizations listed below will perform functions similar to those listed for the Verification Board:

- NETWARCOM
- MCCDC
- SPAWAR 05
- MCSC
- NWDC
- ONR
- OPNAV N20, N61, N6F and N81F

- HQMC C4
- DoN CIO
- ASN (RDA) CHENG

The Integration Board will direct that a detailed work plan be published that describes the process, roles and responsibilities and schedule for developing the integrated architecture. The Integration Board will approve the work plan, which may be in the form of the AV-1 or an architecture development methodology, monitor its progress and direct changes as necessary.

2.3 FORCENET INTEGRATED ARCHITECTURE INTEGRATION AGENT

SPAWAR 05 will serve as the FORCENet Integrated Architecture Integration Agent, or Integration Agent. The Integration Agent will manage integration process functions, as directed by the Integration Board. The Integration Agent is also responsible for the development and operation of a configuration management process, creation and maintenance of the Integrated Dictionary (AV-2) and providing technical and configuration management recommendations to the Integration Board.

2.4 FORCENET OPERATIONAL VIEW TEAM

The lead operational architects at NETWARCOM and MCCDC serve as co-leads for the OV Team. The leaders of the OV Team will be responsible for developing appropriate sections of the work plan described in section 2.2. Subject matter experts from applicable operational organizations and headquarters staffs for communications and networks, command and control, battlespace awareness and intelligence, surveillance and reconnaissance will provide technical expertise to ensure fleet requirements are adequately addressed in the operational views. MCCDC is responsible for ensuring that subject matter experts from the Marine Corps participate as required and that the content of the OVs in the FORCENet architecture are reflective of Marine Corps doctrine and concepts.

2.5 FORCENET SYSTEMS/TECHNICAL VIEW TEAM

The lead systems architects at SPAWAR 05 and MCSC will serve as co-leads for the SV/TV Team. The leaders of the SV/TV Team will be responsible for developing appropriate sections of the work plan described in section 2.2. Subject matter experts from the appropriate program offices and other system commands will participate to ensure that system and technical requirements are adequately addressed. MCSC is responsible for ensuring that subject matter experts from the Marine Corps participate as required and that the content of the systems and technical views in the FORCENet architecture are reflective of Marine Corps systems and standards. The technical standards working group is an integral part of the SV/TV Team.

2.6 DON CIO AND ASN (RDA) CHENG ARCHITECTURE GUIDANCE

DoN CIO will provide guidelines for the Federal, Global Information Grid (GIG), Business Enterprise Architecture (BEA), Clinger-Cohen processes. ASN RDA CHENG will provide high-level architecture guidance for the DoN.

2.7 JOINT FORCES COMMAND (JFCOM)

JFCOM J89 provides Joint architecture guidance to the military Services' architecture development organizations.

2.8 SERVICE HEADQUARTERS

OPNAV N6 and HQMC C4 serve as the DON Deputy Chief Information Officers.

2.9 SERVICE AUTHORITY

No provision of this governance document supersedes individual Service authority under law or regulation relative to the development of architecture not related to FORCEnet, nor does it preclude or restrict individual Service participation in Office of the Secretary of Defense (OSD), joint or DoN forums, working groups or integrated process teams on matters of architecture.

3. FORCENET ARCHITECTURE GOVERNANCE PROCESS

Figure 2 shows the FORCENet Integrated Architecture Governance Process.

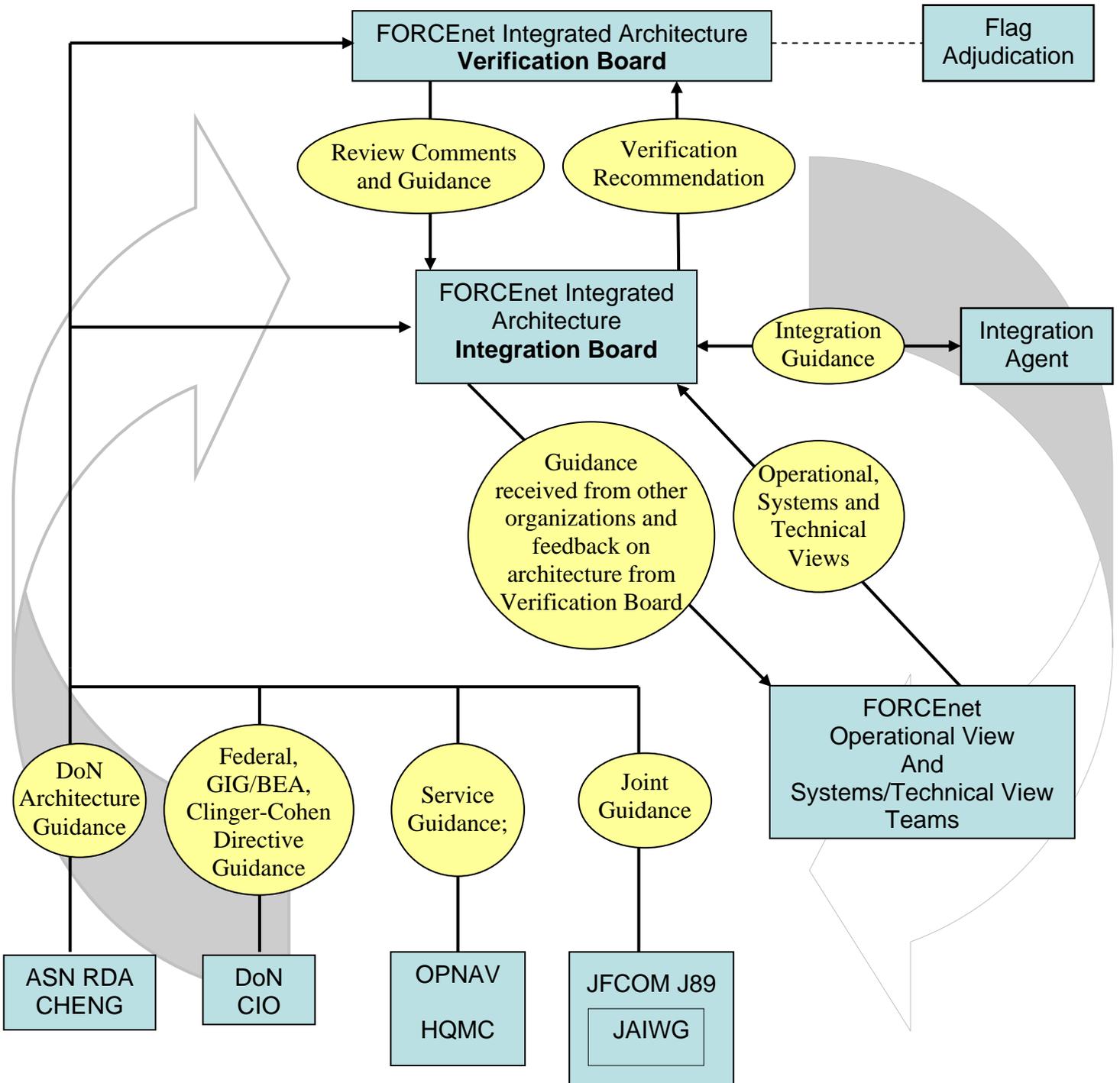


Figure 2 – Architecture Governance Process

The ovals in figure 2 show the information exchanged between organizations, shown in the rectangles, as indicated by the direction of the arrows. The cyclical block arrows indicate the iterative nature of the architecture development and governance processes.

3.1 HIGH-LEVEL GUIDANCE

ASN (RDA) CHENG and DoN CIO will provide guidance on DoN architecture development, Federal, GIG, BEA, and Clinger-Cohen directive and other regulations to the Integration and Verification Boards. The Integration Board will disseminate this information to the OV Team and SV/TV Team. Service architectural organizations work with JFCOM J89 via the Joint Architecture Integration Working Group (JAIWG) to generate common architecture lexicons, data formats, standards, system functions and operational activity lists, and other tools, standards and procedures to promote integration of joint and multi-service integrated architecture efforts. This joint architecture guidance will be fed into the FORCENet architecture processes by those DoN organizations involved with the JAIWG.

3.2 ARCHITECTURE VIEW DEVELOPMENT

The OV Team and SV/TV Team will develop DoDAF compliant operational and systems/technical views, respectively, and additional products as required by the AV-1, and provide them to the Integration Board. The process used to develop the views is detailed in the AV-1. These teams will collaborate throughout the development process to ensure compatibility among the views.

3.3 FORCENET ARCHITECTURE INTEGRATION

The Integration Board receives guidance from several organizations, and disseminates it to the OV and SV/TV Teams, and works with them to ensure the architecture is integrated by establishing view dependencies and information exchanges required between the development teams to ensure FORCENet is developed in an integrated manner.

The Integration Board will ensure the concepts, concepts of operations and associated capabilities have been expressed in integrated architecture products that have technical and DoDAF compliance, as well as compliance with applicable OSD and joint requirements for architecture development and interoperability.

The Integration Agent will manage and maintain the configuration of the architecture description data, and will develop and coordinate the architecture configuration control process subject to the approval of the Integration Board. The Integration Agent will use the DoD Architecture Repository System (DARS) as the single FORCENet architecture repository. The Integration Agent will develop and maintain the FORCENet architecture Integrated Dictionary (AV-2). The Integration Agent will also provide technical support to the Integration Board and conduct other such activities in support of architecture development as may be directed by the Integration Board.

3.4 ARCHITECTURE VERIFICATION

The Verification Board will meet approximately quarterly, or as required, to examine applicable products, particularly those products that will influence processes outside of the architecture. The representatives from each organization listed in section 2.1 will review applicable proposed products of the FORCEnet architecture from his or her specialty and perspective to ensure all requirements are met. The Verification Board will ensure that the functional concepts, concept of operations and associated capabilities have been accurately expressed in an architectural format.

Representatives from individual organizations may abstain from voting on a particular architecture data set. Two-thirds of the listed organizations must be represented to form a quorum to ensure the entire DoN is well represented when evaluating architecture products that apply across both Services. When voting on decisions to promulgate a revision to an architecture product, a two-thirds majority vote of the organizations participating is required. This will eliminate the simple majority possibility of having only one component (Navy or Marine Corps) endorse a product. Minority dissenting opinions regarding a product that is approved by vote will be recorded and considered when developing the next version of the product. Organizational representatives may vote by proxy, by designating another representative to deliver their vote. Organizational representatives voting by proxy must review architecture products and provide a vote in writing to the representative delivering their vote. Lack of a documented vote will be considered an abstention.

If the Integration Board Co-Chairs concur that a set of architecture products only applies to either Navy or Marine Corps, the Integration Board Co-Chairs will recommend to the Verification Board Co-Chairs that a 'Service Specific' Verification Board should be convened to evaluate those architectural products. If the Verification Board Co-Chairs call a 'Service Specific' Verification Board, the representatives for the unaffected Service do not need to attend and will not vote. The representatives from DoN organizations, ASN (RDA) CHSENG, DoN CIO and ONR, will still participate to ensure the essence of the verification process is met. When a Service Specific Verification Board is conducted, a two-thirds majority of voting representatives must concur for promulgation of a product.

If the Verification Board decides not to promulgate a product, it will provide direction to the OV and SV/TV Teams via the Integration Board. The Integration Board will work with the OV and SV/TV Teams to modify the architecture and adjudicate comments. After the architecture is revised to address the Verification Board comments, the Verification Board will examine the modifications and either promulgate the architecture products for use or instruct the Integration Board to further refine the products, if required.

The Verification Board process may be done virtually, if the proposed changes or required corrections are minor. If a virtual review and vote are used, the corrected architecture products, along with explanatory notes discussing the revisions or required corrections, will be posted on the designated workspace. The Verification Board

membership will be notified by email, and will have 3 weeks to review the products and provide their vote. Since the changes are minor, only “accept” or “reject” votes will be cast. If no vote is registered by an organization before the deadline, abstention will be assumed. Within one week of the voting deadline, the Verification Board will be informed of the results of the virtual review and vote process.

If an impasse is reached regarding a product, the Verification Board can use Flag Officer/General Officer adjudication of the issue with the senior FORCENet stakeholders.

After the Verification Board decides to promulgate architecture products for use, the Integration Agent will announce the current version via naval record message. The approved data and products will be maintained in the DoD Architecture Registry System (DARS), and the next iteration will begin when required. The file management in DARS will be in accordance with the configuration management plan developed by the Integration Board.

3.5 ARCHITECTURE ITERATION

The FORCENet Integrated Architecture will be iteratively developed, so improvements and enhancements will be done on a cyclical basis. Subsequent iteration will follow the same basic governance process.

APPENDIX A – LIST OF ACRONYMS

ADC, CD	Assistant Deputy Commandant for Combat Development
AV	All View
BEA	Business Enterprise Architecture
C2	Command and Control
C4	Command, Control, Communications and Computers
CMC	Commandant of the Marine Corps
DARS	DoD Architecture Repository System
DC, Aviation	Deputy Commandant for Aviation
DC, I&L	Deputy Commandant, Installation and Logistics
DC, P&R	Deputy Commandant for Programs and Resources
DC, PP&O	Deputy Commandant, Plans, Policies and Operations
DoDAF	Department of Defense Architecture Framework
DoN	Department of the Navy
DoN CIO	Department of the Navy Chief Information Officer
FAM	Functional Area Manager
GCE	Ground Combat Element
GIG	Global Information Grid
HQMC	Headquarters Marine Corps
HSI	Human Systems Integration
ISR	Intelligence, Surveillance and Reconnaissance
JAIWG	Joint Architecture Integration Working Group
JCIDS	Joint Capabilities Integration and Development System
JFCOM	U.S. Joint Forces Command
MCCDC	Marine Corps Combat Development Command
MCSC	Marine Corps Systems Command
NETWARCOM	Naval Network Warfare Command
NWDC	Navy Warfare Development Command
ONR	Office of Naval Research
OPNAV	Office of the Chief of Naval Operations
OV	Operational View
POR	Program of Record
PPBE	Planning, Programming, Budgeting and Execution
SPAWAR	Space and Naval Warfare Systems Command
SV	Systems View
TV	Technical View