

THE **Naval** Operations & Planning



**Guide to Designing,
Planning & Conducting
Maritime Operations**

SMARTBOOK

Multi-Service!

Designed for all levels of
Soldiers, Sailors, Airmen,
Marines & Civilians

**JP 3-32
NDPs 1 & 4
NWP 3-32.1
NWP 5-01
plus more!**

**Maritime Forces,
Organization and
Capabilities**

**Maritime Operations
at the Operational
Level of War**

**Maritime Operations
Center (MOC)**

**Maritime &
Operational Law**

**The Maritime
Operations Process**

**Naval
Planning**

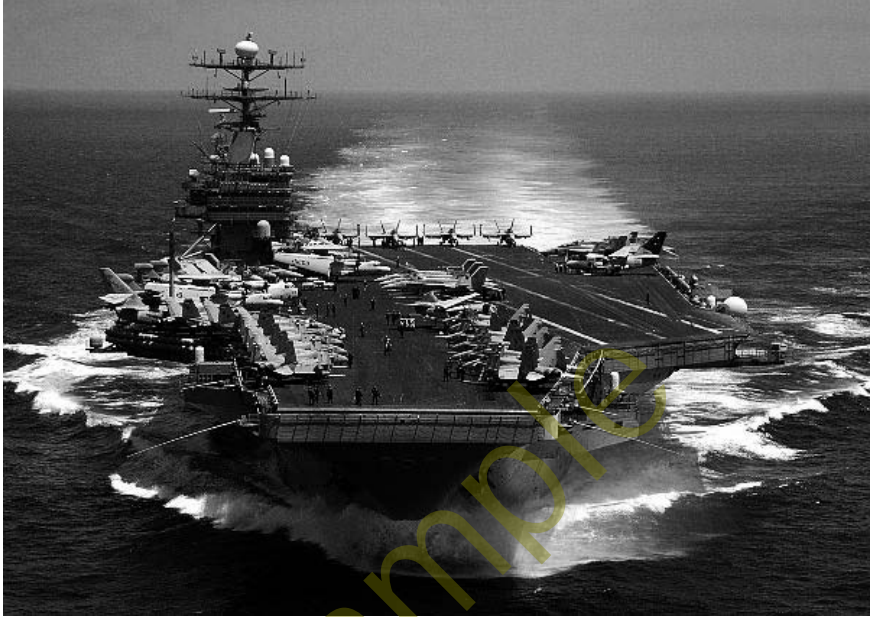
**Naval
Logistics**

**Naval
Theater Security
Cooperation**



(Sample Only) Find this and other SMARTbooks at: www.TheLightningPress.com

THE **Naval** Operations & Planning



SMARTbook



**Guide to Designing, Planning &
Conducting Maritime Operations**

The Lightning Press
Norman M. Wade



The Lightning Press



2227 Arrowhead Blvd.

Lakeland, FL 33813

24-hour Voicemail/Fax/Order: 1-800-997-8827

E-mail: SMARTbooks@TheLightningPress.com

www.TheLightningPress.com

The Naval Operations & Planning SMARTbook

Guide to Designing, Planning & Conducting Maritime Operations

Copyright © 2010 Norman M. Wade

ISBN: 978-0-9824859-5-8

All Rights Reserved

No part of this book may be reproduced or utilized in any form or other means, electronic or mechanical, including photocopying, recording or by any information storage and retrieval systems, without permission in writing by the publisher. Inquiries should be addressed to The Lightning Press.

Notice of Liability

The information in this SMARTbook and quick reference guide is distributed on an "As Is" basis, without warranty. While every precaution has been taken to ensure the reliability and accuracy of all data and contents, neither the author nor The Lightning Press shall have any liability to any person or entity with respect to liability, loss, or damage caused directly or indirectly by the contents of this book. If there is a discrepancy, refer to the source document. This SMARTbook does not contain classified or sensitive information restricted from public release.

"The views presented in this publication are those of the author and do not necessarily represent the views of the Department of Defense or its components."

The Lightning Press would like to recognize and thank Darrell Ames for his work on this book and the series of SMARTbooks over the years, Jim Brown for his layout and design assistance, and Jason Salata for his naval warfighting focus and perspective in making this book a reality.

SMARTbook is a trademark of The Lightning Press.

Photos. Courtesy Department of Defense and the Military Services.

Printed and bound in the United States of America.



Preface

The Navy Operations & Planning SMARTbook outlines the Navy operational-level fundamentals, command, control, and organization. It is also a bridge between the theory of operational art and the practical specific guidance that Navy commanders and staffs require to accomplish their mission. It is prepared to complement existing **joint and Navy doctrine** and provides a general guide to the application of command at the **operational level of war** and the staff organization and functionality required to support the operational commander.

The **U.S. Navy** is an instrument of national power, employed to prevent conflict and, if necessary, prevail in war. It is organized, trained and equipped primarily to fight at and from the sea and to influence events on land. Unlike the other components of the joint force, the **maritime component** routinely conducts operations across all of the domains, described as air, land, maritime, space, and the information environment.

The **JFMCC** is the JFC's maritime warfighter. The JFMCC's forces/capabilities may consist of subordinate commanders and forces from any Service and may include multinational forces to accomplish the portion of joint operations that occurs predominantly in the maritime domain, defined as "the oceans, seas, bays, estuaries, islands, coastal areas, and the airspace above these, including the littorals."

Design is a methodology for applying critical and creative thinking to understand, visualize, and describe complex, ill-structured problems and develop approaches to solve them. **Military planning**, and by extension Navy planning, is the process by which a commander visualizes an end state and then determines the most effective ways by which to reach the end state. Through the Navy Planning Process (NPP), a commander can effectively plan for and execute operations, ensure that the employment of forces is linked to objectives, and integrate naval operations seamlessly with the actions of a joint force. **Preparation** helps the JFMCC transition between planning and execution. **Execution** is putting a plan into action by applying combat power to accomplish the mission and using situational understanding to assess progress and make execution and adjustment decisions. Execution combines continued planning, preparation, and assessment with the challenges of a dynamic adversary and the fog of war. **Assessment** is a key portion of the commander's decision cycle.

Assessment is the continuous monitoring and evaluation of the current situation and the progress of an operation. Based on their assessment, commanders direct adjustments, thus ensuring the operation remains focused on accomplishing the mission.

SMARTbooks - The Essentials of Warfighting!

Recognized as a doctrinal reference standard by military professionals around the world, SMARTbooks are designed with all levels of Soldiers, Sailors, Airmen, Marines and Civilians in mind.



SMARTbooks can be used as quick reference guides during actual tactical combat operations, as study guides at military education and professional development courses, and as lesson plans and checklists in support of training. Serving a generation of warfighters, military reference SMARTbooks have become "mission-essential" around the world. Visit www.TheLightningPress.com for complete details!



References

The following references were used to compile The Navy Operations & Planning SMART-book. All references are unclassified, considered public domain, available to the general public, and designated as "approved for public release; distribution is unlimited." The Navy Operations & Planning SMARTbook does not contain classified or sensitive material restricted from public release.

Joint Publications (JPs)

JP 3-0 (Chg 1)	Feb 2008	Joint Operations (with Change 1)
JP 3-08	Mar 2006	Interagency, IGO and NGO Coordination (I & II)
JP 3-16	Mar 2007	Multinational Operations
JP 3-32 (Chg 1)	Aug 2006	Command and Control for Joint Maritime Operations
JP 5-0	Dec 2006	Joint Operation Planning

Naval Doctrine Publications (NDPs)

NDP1	Mar 1994	Naval Warfare
NDP4	Feb 2001	Naval Logistics
NDP5	Jan 1996	Naval Planning

Navy Warfare Publications (NWP)

NWP 1-14M	Jul 2007	The Commander's Handbook on the Law of Naval Operations
NWP 3-32	Oct 2008	Maritime Operations at the Operational Level of War
NWP 3-56 (REV A)	Aug 2001	Composite Warfare Commander's Manual
NWP 5-01	Jan 2007	Navy Planning

Navy Tactics, Techniques, and Procedures (NTTPs)

NTTP 3-32.1	Oct 2008	Maritime Operations Center
-------------	----------	----------------------------

Training Circulars (TCs) and other Publications

JWFC	Sept 2010	Pamphlet 10, Design in Military Operations: A Primer for Joint Warfighters
NWC MCCH	Feb 2010	NWC Maritime Component Commander Handbook
NWC 3153K	Jul 2009	Joint Military Operations Reference Guide
NWC 4020A	Sept 2008	On Naval Warfare. Dr. Milan Vego, Joint Military Operations Department
NWC NP32	2008	Newport Papers 32: Major Naval Operations. Milan Vego, Center for Naval Warfare Studies
TCH-TSC	2009	Tactical Commander's Handbook for Theater Security Cooperation
NSW Press Kit	2010	Naval Special Warfare Command Fact File



Table of Contents

Chap 1

Maritime Forces, Organization & Capabilities

I. U.S. Navy	1-1
I. Mission and Purpose	1-1
II. Organization & Command Structure	1-2
A. U.S. Navy Administrative Organization	1-2
B. U.S. Navy Operational Organization	1-3
III. Composition & Capability of Major Deployable Elements	1-4
A. Carrier Strike Group (CSG)	1-4
B. Amphibious Ready Group (ARG)/Marine Expeditionary Unit (MEU)	1-4
C. Surface Strike Group (SSG)	1-5
D. Naval Fleet Auxiliary Force (NFAF)	1-5
IV. Capabilities	1-6
Future Force	1-6
A. Mine Warfare	1-6
B. Aircraft Carriers & Naval Aviation	1-8
C. Surface Combatants	1-10
D. Submarine Forces	1-12
E. Amphibious Warfare	1-14
F. MSC Support Ships	1-16
V. Navy Reserve	1-18
II. U.S. Marine Corps	1-19
I. Mission	1-19
II. Organization and Structure	1-19
III. Marine Air/Ground Task Force (MAGTF)	1-21
IV. Types of MAGTFs (MEF/MEB/MEU/SPMAGTF)	1-22
V. USMC Concepts and Capabilities	1-25
VI. Major Marine Corps Equipment	1-26
III. U.S. Coast Guard	1-27
I. USCG Organization	1-27
II. Coast Guard Forces	1-28
III. USCG Roles and Mission	1-29
IV. Ports, Waterways & Coastal Security (PCWS)	1-30
IV. Naval/Marine Special Warfare Forces	1-33
U.S. Special Operations Command (USSOCOM)	1-34
I. Naval Special Warfare (NSW)	1-33
II. U.S. Marine Corps Special Operations Forces	1-38
V. Strategic Lift/Force Projection	1-39
I. Force Projection	1-39
II. U.S. Transportation Command (USTRANSCOM)	1-40
III. U.S. Maritime Administration (MARAD)	1-42
IV. Strategic Deployment	1-44
V. Strategic Lift Port Operations	1-46

Maritime Operations

I. Operational Warfare at Sea	2-1
I. Navy Doctrine	2-1
II. History/Background	2-2
III. The Maritime Domain	2-4
IV. Joint Operational Areas	2-6
- Maritime Theater Structure	2-7
V. Operational Level of Command (OLC).....	2-8
II. Range/Spectrum of Maritime Operations	2-9
I. Levels of War.....	2-9
A. Strategic Level of War.....	2-10
B. Operational Level.....	2-10
- Unified Action	2-11
C. Tactical Level	2-11
II. Maritime Operations Across the Range of Military Operations	2-12
A. Military Engagement, Security Cooperation, and Deterrence.....	2-13
B. Crisis Response or Limited Contingency Operations	2-13
C. Major Operations or Campaigns Involving Large-Scale Combat.....	2-13
IV. Major Naval Operations.....	2-14
A. Major Operations: Fleet versus Fleet.....	2-15
B. Major Operations: Fleet versus Shore.....	2-15
C. Major Operations versus Enemy Maritime Trade	2-15
D. Major Naval Operations to Defend/Protect Maritime Trade.....	2-15
E. Destruction/Protection of Seaborne Nuclear Deterrent Forces.....	2-15
F. Major Operations in Support of Ground Forces on the Coast	2-15
IV. Aegis Ballistic Missile Defense (BMD).....	2-16
V. Cyber Warfare	2-16
- U.S. Cyber Command (USCYBERCOM).....	2-16
- U.S. Fleet Cyber Command (U.S. Tenth Fleet).....	2-18
- Naval Network Warfare Command (NETWARCOM)	2-18
VI. Maritime Operational Threat Response (MOTR)	2-17
III. Objectives of Naval Operations	2-19
Strategic Offensive versus Defensive Posture	2-19
Operational Factors in Naval Warfare	2-20
I. Sea Control.....	2-19
- Choke-Point Control	2-22
- Basing/Deployment Area Control.....	2-22
- Obtaining Air Superiority	2-22
- Open Ocean vs. Narrow Seas	2-23
A. Obtaining Sea Control.....	2-24
B. Maintaining Sea Control.....	2-26
C. Exercising Sea Control	2-26
- Projecting Power Ashore	2-26
II. Sea Denial	2-27
- Sea Denial Dynamics.....	2-28
III. Attack on Maritime Trade.....	2-30
- Objectives	2-30
- Tenets.....	2-30
- Offensive Mining	2-31
- Commercial Blockade	2-31

IV. Defense and Protection of Maritime Trade	2-31
- Defense of Maritime Trade	2-32
- Protection of Maritime Trade	2-32
IV. Levels of Maritime Command	2-33
Operational vs. Administrative Control	2-33
Command Authority	2-36
Impact of Level of Authority on Command at the Operational Level	2-36
I. Command Relationships	2-34
A. U.S. Joint Doctrine Command Relationships	2-34
B. Allied and Multinational Maritime Command	2-35
II. Joint Force Components	2-37
A. Unified Command	2-37
B. Subordinate Unified Command	2-37
C. Joint Task Force (JTF)	2-38
III. Joint Force Commander	2-38
- Possible Components in a Joint Force	2-38
- Availability of Forces for Joint Operations	2-39
A. Commander, Joint Task Force (CJTF)	2-40
B. Service Component Commander	2-42
C. Functional Component Commander	2-44
V. Joint Force Maritime Component Commander (JFMCC)	2-45
I. Establishing a JFMCC	2-45
A. JFMCC Area of Operations	2-46
B. Integration with Joint Campaign Planning	2-46
C. Movement and Maneuver of Maritime Forces	2-52
D. Intelligence, Surveillance, and Reconnaissance (ISR)	2-53
II. JFMCC Functions	2-47
III. JFMCC Roles and Responsibilities	2-48
IV. Notional Joint Maritime Operations Organization and Processes	2-50
V. Undersea/Antisubmarine Warfare (USW/ASW)	2-54
VI. Maritime Fires Support	2-56
VII. Joint Maritime Operations Targeting	2-58
VIII. Considerations for Employing a JFMCC	2-60
VI. Navy Tactical Headquarters and Task Organization	2-61
I. Notional Relationship of Command Level to Level of War	2-61
II. Navy Task Organization (Task Forces, Groups, Units and Elements)	2-62
III. Navy Tactical Headquarters (CSG, ESG, SSG)	2-64
IV. Navy Composite Warfare Commander (CWC)	2-65
A. Officer in Tactical Command/Composite Warfare Commander (OTC/CWC)	2-66
B. Principle Warfare Commanders (PWC)	2-68
C. Functional Coordinators	2-70
VII. Multinational Operations	2-71
Alliance	2-71
Coalition	2-71
I. Multinational Chains of Command	2-71
A. National Command	2-71
B. Multinational Command	2-72
Command Structures of Forces in Multinational Operations	2-73
II. Maritime Multinational Forces	2-73
III. Civil-Military Coordination and Dealing with Nonmilitary Agencies	2-74
(Interagency, Intergovernmental & NGOs)	

Maritime Operations Center (MHQ/MOC)

I. MHQ / Maritime Operations Center (MOC)	3-1
I. The Maritime Headquarters (MHQ)	3-1
A. Command Structure of the MHQ	3-2
B. Maritime Operations Structure (MOC)	3-3
- MOC Centers - Intelligence, Operations, and Logistics	3-6
- MOC Director	3-6
- B2C2WG (Boards, Bureaus, Centers, Cells, and Working Groups)	3-6
C. Fleet Management and Operational Structures	3-4
II. Battle Rhythm	3-8
III. Operational-Level Functions	3-10
A. Command and Control	3-11
B. Fires	3-11
C. Intelligence	3-12
D. Movement and Maneuver	3-13
E. Protection	3-13
F. Sustainment	3-14
II. Forming & Transitioning the MOC Staff	3-15
I. Forming the MOC Staff	3-15
II. Staff Transition From Enduring to Emergent Operations	3-16
III. Balancing Enduring and Emergent Mission Requirements	3-17
IV. Seven-Minute Drills	3-17
V. Commander's Considerations During Staff Formation	3-18
III. Maritime Operational Command	3-19
I. Inherent Relationships of Command to Level of War	3-19
II. Exercising Operational Command	3-20
A. Operational-Level Functions	3-20
B. Role of the Operational Commander in C2	3-20
C. Level of Control	3-21
D. Control Areas	3-24
II. Maritime Domain Awareness (MDA)	3-22
- Maritime Domain Awareness Goals	3-23
- Maritime Domain Awareness Process and Functions	3-23
- Maritime Domain Awareness Critical Tasks	3-23
IV. Operational & Maritime Law	3-25
The Relationship Between Law and Policy	3-25
I. Rules of Engagement (ROE) & Rules For the Use of Force (RUF)	3-26
II. Legal Regimes of Oceans and Airspace	3-27
III. Law of Armed Conflict Fundamentals	3-29
IV. Legal Basis to Stop, Board, Search, and Seize Vessels	3-30
V. Piracy	3-31
VI. Other Fundamental Legal Issues Relevant to the C/JFMCC	3-32

The Maritime Operations Process

Operations Process Overview.....	4-1
I. Operations Process Activities	4-2
II. Operations Process Supporting Topics.....	4-4
I. Planning	4-5
- The Navy Planning Process (NPP)	4-5
- Naval Planning and the Levels of War	4-6
II. Preparation.....	4-7
I. Preparation Functions.....	4-7
II. Integrating Processes and Continuing Activities During Preparation.....	4-8
A. Intelligence Preparation of the Operational Environment (IPOE)	4-8
B. Targeting	4-9
C. Intelligence, Surveillance, and Reconnaissance (ISR) Synchronization ..	4-9
D. Security.....	4-9
E. Operational Protection	4-9
F. Battlespace Management.....	4-10
III. Preparation Activities	4-9
IV. Rehearsals	4-10
- Joint Operations Rehearsals.....	4-10
- Navy Rehearsals.....	4-10
III. Execution	4-11
I. Execution Fundamentals	4-11
A. Competing Demands	4-12
B. Situational Understanding.....	4-12
C. Commander's Critical Information Requirements (CCIRs).....	4-12
D. Decisionmaking During Execution	4-12
II. Commander's Decision Cycle	4-14
A. Assess.....	4-15
B. Plan.....	4-15
C. Direct	4-15
D. Monitor.....	4-15
E. Communications	4-15
III. Risk Assessment	4-16
- Accepting Risk.....	4-16
- Applying Risk Management.....	4-17
- Risk Management for a JFMCC/NCC	4-17
IV. Event Horizons	4-18
- Near	4-18
- Mid	4-18
- Far.....	4-18
IV. Assessment	4-19
I. The Assessment Process	4-19
A. Measure of Performance (MOP).....	4-19
B. Measure of Effectiveness (MOE).....	4-19
II. Combat Assessment.....	4-22
A. Battle Damage Assessment (BDA).....	4-22
B. Munitions Effectiveness Assessment (MEA).....	4-22
C. Reattack Recommendation	4-23
III. Assessment Estimate Development and Integration with the NPP	4-24

Naval Planning

Navy Planning Overview	5-1
I. The Navy Planning Process (NPP).....	5-2
II. Nesting of the Navy Planning Process Within Other Planning Processes.....	5-4
- Navy Planning and the Levels of War.....	5-4
- Navy Planning Process and Effects.....	5-4
- Joint Operation Planning and Execution System (JOPEs).....	5-5
III. Roles in the Navy Planning Process.....	5-6
IV. Intelligence Preparation of the Operational Environment (IPOE).....	5-8
V. Operational Art & Design.....	5-10
VI. Design in Military Operations.....	5-14
I. Mission Analysis	5-17
Inputs.....	5-18
Process.....	5-19
1. Identify Source(s) of Mission.....	5-20
2. Determine Support Relationships.....	5-20
3. Analyze the Higher Commander's Mission.....	5-20
4. Determine Specified, Implied, and Essential Tasks.....	5-22
5. State the Purpose.....	5-23
6. Identify Externally Imposed Limitations.....	5-23
7. Analyze Available Forces and Assets.....	5-26
8. Determine Critical Factors, Centers of Gravity, and Decisive Points.....	5-26
9. Develop Planning Assumptions.....	5-27
10. Conduct Initial Risk Assessment.....	5-27
11. Develop Proposed Mission Statement.....	5-27
12. Conduct Mission Analysis Briefing.....	5-28
13. Develop Initial Commander's Intent.....	5-28
14. Develop Commander's Critical Information Requirements (CCIR).....	5-30
15. Develop Commander's Planning Guidance.....	5-32
16. Develop Warning Order.....	5-34
Outputs.....	5-34
Key Points.....	5-34
II. Course of Action Development	5-35
Inputs.....	5-36
Process.....	5-36
1. Analyze Relative Combat Power.....	5-36
2. Generate Course of Action Options.....	5-38
3. Test for Validity.....	5-39
4. Recommend Command and Control Relationships.....	5-39
5. Prepare Course of Action Sketch and Statement.....	5-39
6. Prepare Course of Action Briefing.....	5-41
7. Develop Course of Action Analysis and Evaluation Guidance.....	5-41
Outputs.....	5-41
Key Points.....	5-41
III. Course of Action Analysis (Wargaming)	5-47
Inputs.....	5-48
Process.....	5-48
1. Organize for Wargaming.....	5-50
2. List all Friendly Forces.....	5-50

3. Review Assumptions	5-50
4. List Known Critical Events	5-50
5. Determine the Governing Factors	5-51
6. Select the Wargaming Method	5-51
7. Record and Display Results	5-52
8. Wargame the Combat Actions and Assess the Results	5-52
9. Refine Staff Estimates	5-56
10. Update and Refine Intelligence Preparation of the Operational Environment (IPOE) Products	5-56
Outputs	5-58
IV. Course of Action Comparison & Decision	5-59
Inputs	5-59
Process	5-60
1. Perform Course of Action Comparison	5-60
2. Perform Course of Action Evaluation	5-61
3. Make Final Tests for Feasibility and Acceptability	5-61
4. State Commander's Decision	5-61
- Sample Decision Brief	5-64
5. Prepare Synchronization Matrix	5-64
6. Develop the Concept of Operation (CONOPS)	5-66
7. Refine Intelligence Preparation of the Operational Environment (IPOE)	5-66
Outputs	5-66
Key Points	5-66
V. Plans and Orders Development	5-67
Inputs	5-68
Process	5-70
1. Prepare Plans and Orders	5-70
- Operation Plans & Orders (OPLANs/OPORDs)	5-71
2. Reconcile Plans and Orders	5-72
3. Backbrief and Crosswalk Plans and Orders	5-72
4. Commander Approves Plans and Orders	5-72
Outputs	5-72
Key Points	5-72
VI. Transition	5-73
Inputs	5-73
Process	5-74
1. Transition Briefing	5-74
- Roles of the FPC, FOPS, COPS (and Internal/External Transitions)	5-75
2. Transition Drills	5-76
3. Confirmation Brief	5-76
Outputs	5-76
Key Points	5-76

Chap 6

Naval Logistics

I. Fundamentals of Naval Logistics	6-1
I. The Mission of Naval Logistics	6-1
II. Levels of Logistics Support	6-2
III. Process Elements	6-3
IV. Principles of Logistics	6-6
V. High Yield Logistics (HYL)	6-8
VI. Focused Logistics	6-10

II. Naval Logistics Planning	6-11
Operational Logistics (OPLoG)	6-11
I. The Logistics Planning Process	6-12
II. Naval Logistics Planning	6-12
III. Logistics Support to the Navy Planning Process (NPP)	6-14
IV. Logistics Planning Considerations	6-18
III. Logistics Command and Control Systems	6-19
I. Navy Logistics System Organization	6-19
II. Theater Logistics Command and Control	6-20
III. Naval Theater Logistics Command and Control	6-22
IV. Multinational Theater Logistics Command and Control	6-24
V. Logistics Information Systems	6-26
IV. Naval Theater Distribution	6-27
I. The Defense Supply System	6-27
II. The Naval Supply System	6-27
III. The Marine Corps Supply System	6-28
IV. The Naval Transportation System	6-28
- The Defense Transportation System	6-29
V. The Hub and Spoke Concept of Navy Theater Distribution	6-30
VI. The Logistics Pipeline	6-32
VII. Force Projection	6-33

Chap 7

Navy Theater Security Cooperation

I. Navy Theater Security Cooperation Overview	7-1
I. Guidance	7-1
II. Security Cooperation and Assistance - Planning and Activities	7-2
A. Security Cooperation	7-2
B. Security Assistance	7-3
C. Theater Security Cooperation (TSC)	7-3
III. Theater Security Cooperation Activities	7-4
II. Security Cooperation Activity Planning	7-5
I. Planning	7-5
II. General Security Cooperation Activity Checklist	7-6
III. Building Relationships, Capabilities & Capacity	7-9
- Mission Commander	7-9
- Social Norms and Customs	7-9
I. Building Relationships	7-10
II. Building Capacities	7-12
A. Exercises	7-12
B. Training	7-13
C. Information Sharing and Intelligence Cooperation	7-13
III. Building Capacity	7-15

Index

Index

Index-1 to Index-4

I. Operational Warfare at Sea

Ref: NWP 3-32, *Maritime Operations at the Operational Level of War* (Oct '08), chap. 1.

I. Navy Doctrine

Navy doctrine is a statement of officially sanctioned beliefs, war-fighting principles, and terminology that describes and guides the proper use of the Navy in maritime operations. The Army, Air Force, and Marine Corps focus and build doctrine for the execution of missions on or above land. With its focus on land operations joint doctrine tacitly reflects the fact that the job of gaining and maintaining maritime superiority or supremacy — of engaging and winning battles in the maritime domain — falls almost exclusively to the Navy. Joint doctrine is authoritative guidance and takes precedence over individual Service doctrine, which must be consistent with joint doctrine. As a body of best practices or norms, Navy doctrine “is authoritative but requires judgment in application.” Doctrine is not an impediment to a commander’s exercise of imagination. Rather, doctrine is a framework of fundamental principles, practices, techniques, procedures, and terms that guides a commander in employing his force to accomplish the mission.

Maritime Operations

Maritime Superiority — That degree of dominance of one force over another that permits the conduct of maritime operations by the former and its related land, maritime, and air forces at a given time and place without prohibitive interference by the opposing force. (JP 1-02. Source: JP 3-32)

Maritime Supremacy — That degree of maritime superiority wherein the opposing force is incapable of effective interference. (JP 1-02)

Ref: NWP 3-32, *Maritime Operations at the Operational Level of War*, p. 1-1.

The principles discussed within doctrine are enduring, yet they evolve based on policy and strategy, in light of new technology or organizations, from lessons gained from experience, and insights derived from operational analysis. Navy doctrine standardizes terminology, training, relationships, responsibilities, and processes. Its focus is on how to think about operations, not what to think about operations. Doctrine provides a basis for analysis of the mission and its objectives and tasks, and developing the commander’s intent and associated planning guidance. It provides a foundation for training and education. Doctrine is distinct from concepts in that it describes operations with extant capabilities and is subject to policy, treaty, and legal constraints, while concepts, whether near-term or futuristic in nature, can explore new methods, structures, and systems employment without the same restrictions.

NWP 3-32, *Maritime Operations at the Operational Level of War* outlines the Navy operational-level fundamentals, command, control, and organization. It is also a bridge between the theory of operational art and the practical specific guidance that Navy commanders and staffs require to accomplish their mission. It is prepared to complement existing joint and Navy doctrine and provides a general guide to the application of command at the operational level of war and the staff organization and functionality required to support the operational commander.

II. Maritime Operations Across the Range of Military Operations

Ref: NWP 3-32, *Maritime Operations at the Operational Level of War* (Oct '08), p. 2-7 to 2-8.

The Navy is not limited to the maritime domain and conducts activities across the range of military operations.

U.S. Navy Activities - Range Military Ops

Military Engagement, Security Cooperation and Deterrence	Crisis Response and Limited Contingency Operations	Major Operations and Campaigns
<ul style="list-style-type: none">• Homeland Defense• Protection of U.S. Economic Interests• Enforcement of Maritime Treaties• Support of Foreign Policy• Support of Military (Theater) Strategy• Support of Peace Operations	<ul style="list-style-type: none">• Support of Insurgency• Support of Counterinsurgency• Support of Counterterrorism• Foreign Humanitarian Assistance• Civil Support	<ul style="list-style-type: none">• Regional War• Global War

Ref: NWP 3-32, *Maritime Ops at the Operational Level of War*, table 1-1, p. 1-3.

Expanding webs of political, military, economic, social, informational, and infrastructure systems provides opportunities for regional powers to compete on a broader scale and emerge on the global landscape with considerable influence. Littoral and urban environments and other complex terrain will increasingly characterize areas of operation that may include humanitarian crisis conditions and combat operations. Adaptive adversaries continually will seek new capabilities and new employment methods to counter the United States and its allies. As new capabilities, or new methods of employing capabilities, are developed and become more accessible to more players, the conduct of warfare and crisis resolution will change. The nature of war will remain a violent clash of wills between states or armed groups pursuing advantageous political ends. The conduct of warfare will include combinations of conventional and unconventional, kinetic and non-kinetic, and military and nonmilitary actions and operations, all of which add to the increasing complexity of the operational environment.

Future adversaries may lack the ability or choose not to oppose the United States through traditional military action. These adversaries will challenge the United States and its multinational partners by adopting and employing asymmetric methods across selected air, land, maritime, and space domains as well as the information environment against areas of perceived U.S. vulnerability. Many will act and operate without regard for the customary law of war.

Navy and joint forces must maintain an unsurpassed ability to fight and win our nation's wars. Sea power with its concurrent military and geo-economic focus supports national security goals through operations that do not necessarily include either adversaries or combat. Examples include peacekeeping, humanitarian relief operations, and support to civil authorities, foreign and domestic. These operations can contribute to preventing conflict and may require different types of capabilities or different methods of employing those capabilities than traditionally used to fight wars.

Regardless of the type of operation, the Navy and joint forces will require capabilities and processes to respond in the most efficient manner and to minimize the use of military force to that necessary to achieve the overarching strategic objective. This includes the need for engagement before and after conflict/crisis response, the need for integrated involvement with interagency and multinational partners, and the need for multipurpose capabilities that can be applied across the range of military operations.

A common thread throughout the range of military operations is the involvement of a large number of agencies and organizations — many with indispensable practical competencies and significant legal responsibilities and authorities — that interact with the Navy and our multinational partners. The Navy commander at the operational level develops campaign/major OPLAN's that integrate and synchronize maneuver and direct tactical force commanders' actions in conjunction with the actions of other government and nongovernmental agencies to achieve unified action.

A. Military Engagement, Security Cooperation, and Deterrence

Military engagement, security cooperation, and deterrence shape the operational environment and help keep the day-to-day tensions between nations or groups below the threshold of armed conflict while maintaining U.S. global influence. These activities improve relations with potential allies and coalition partners. These ongoing and specialized activities establish, shape, maintain, and refine relations with other nations and domestic civil authorities (e.g., state governors or local law enforcement). The general strategic and operational objective is to protect U.S. interests at home and abroad.

By virtue of their being forward deployed, Navy forces (NAVFOR) have the ability to support accomplishment of national strategic objectives without impacting a country's sovereignty, and routinely are used to conduct military engagement, security cooperation, and deterrence activities that help "shape" the operational environment.

Operational command of these activities is complicated by their continuous nature, fluid strategic priorities in response to world events, and complex identification of measures (goals) from which to access achievement of strategic and operational objectives. Naval commanders at the operational level develop a type of campaign/major OPLAN called a theater security cooperation plan (TSCP) to ensure Navy force actions are correctly prioritized, sequenced, and timed to support achievement of CCDR engagement, security cooperation, and deterrence strategic objectives. These campaign/major OPLAN's, unlike ones developed for other types of military operations, are being executed continuously. Force availability, changes to geographic combatant commander (GCC) priorities, and world events all impact these campaign/major OPLAN's. Achievement of strategic objectives may take decades. Conditions (measures for assessment of strategic objective achievement) will evolve as the plan progresses.

B. Crisis Response or Limited Contingency Operations

Crisis response or limited contingency operations can be a single small-scale, limited-duration operation or a significant part of a major operation of extended duration involving combat. The associated general strategic and operational objectives are to protect U.S. interests and prevent surprise attack or further conflict. The level of complexity, duration, and resources depends on the circumstances. Many of these operations involve a combination of military forces and capabilities in close cooperation with other government agencies (OGA's), IGO's, and NGO's. A crisis may prompt the conduct of foreign humanitarian assistance (FHA), civil support (CS), noncombatant evacuation operations (NEO's), peace operations (PO), strikes, raids, or recovery operations.

C. Major Operations or Campaigns Involving Large-Scale Combat

Major operations or campaigns involving large-scale combat place the United States in a wartime state. In such cases, the general goal is to prevail against the enemy as quickly as possible, conclude hostilities, and establish conditions favorable to the United States and its multinational partners.

III. Major Naval Operations

Ref: *The Newport Papers: Major Naval Operations* (Milan Vego, 2008), chaps. 1 & 2.

Major naval operations are the principal methods by which naval forces achieve operational objectives in a conflict at sea. In generic terms, a major naval operation consists of a series of related major and minor naval tactical actions conducted by diverse naval forces and combat arms of other services, in terms of time and place, to accomplish an operational (and sometimes strategic) objective in a given maritime theater of operations. Major naval operations are planned and conducted in accordance with an operational idea (scheme) and common plan. They are normally an integral part of a maritime or land campaign, but they can sometimes be conducted outside of the framework of a campaign.

A **maritime campaign** is predominantly fought on the open ocean and in sea areas adjacent to a continental landmass. One's naval forces would play the most important role in such a campaign. A land campaign in the littoral area would also involve participation of naval forces. In general, the closer to the continental landmass or large archipelagos one's naval forces have to operate, the more the success of their actions will depend on close cooperation with other services or a high degree of jointness.

Tactical actions in a major naval operation can be fought on the surface, beneath the surface, in the air, and in some cases on the coast. Naval tactical actions can range from actions in which weapons are not used, such as patrols and surveillance, to attacks, strikes, raids, engagements, and naval battles. As the term implies, they are aimed at accomplishing tactical objectives in a given part of a maritime theater.

- In the past, a **naval battle** was the main method of accomplishing a major tactical objective as a part of a major naval operation. It consisted of a series of related attacks, counterattacks, strikes, and counterstrikes coordinated in time and place.
- In the past, a **naval engagement** consisted of a series of related strikes/counterstrikes and attacks/counterattacks aimed to accomplish the most important tactical objective in a naval battle.
- With the advent of missiles and other long-range, highly precise, and lethal weapons it became possible to destroy the enemy force at sea or on the coast at much longer range than by using guns or torpedoes. Hence, a new method of combat force employment called "**strike**" gradually emerged as the principal method of accomplishing major tactical and sometimes operational objectives in war at sea and in the air. Depending on the target to be destroyed or neutralized, one may differentiate tactical, operational, and strategic strikes. A strike can be conducted by a small number of platforms of a single type of force—for example, missile craft, submarines, or attack aircraft (helicopters).
- A broader form of strike is a **naval raid**—conducted by a single or several naval combat arms to accomplish a tactical objective as a part of a major offensive or defensive naval operation. The aim is usually to deny temporarily some position or to capture or destroy an enemy force, coastal installation, or facility. Temporary or local control of the sea is not a prerequisite for the success of these actions. The stronger fleet can also conduct raids to divert the enemy's attention or to force the enemy to react in a secondary sector. A naval raid is usually conducted against an objective that the enemy considers so valuable that its loss or serious degradation cannot be ignored. A larger purpose of a naval raid is to accomplish some temporary advantage, with the threat of future repetition.
- The most frequently conducted tactical action using weapons is a **naval attack**, a combination of tactical maneuver and weapons used to accomplish a minor tactical objective. A naval attack can be conducted independently or as part of a strike or raid. A naval attack can be conducted by a single or several types of platforms.

Types of Major Naval Operations

In generic terms, the main purposes of a major naval operation today in the case of a high-intensity conflict at sea can be fleet versus fleet (destroy the enemy fleet at sea or in its bases); fleet versus shore (conduct an amphibious landing on the opposed shore and destroy enemy coastal installations/facilities); attack against an enemy's maritime trade; defense and protection of friendly maritime trade; destruction of an enemy's (or protection of friendly) sea-based strategic nuclear forces; and support of ground forces operating in the littoral.

A. Major Operations: Fleet versus Fleet

Destruction or neutralization of the main enemy forces at sea and in their bases is the main prerequisite for obtaining and then maintaining sea control in a given part of a maritime theater. This is especially important at the start of the hostilities at sea. In the past, this objective was usually accomplished by a clash of major parts of the opposing fleets in a so-called decisive battle or "general fleet action." Major naval operations to destroy a neutralize a major part of the enemy fleet can be conducted in a distant ocean area or in a narrow sea.

B. Major Operations: Fleet versus Shore

The stronger side at sea will occasionally conduct major naval operations to accomplish operational objectives on the enemy coast, amphibious landings to destroy or annihilate enemy coastal installations/facilities or important military-economic centers deep in the enemy's territory.

C. Major Operations versus Enemy Maritime Trade

Attack on maritime trade in general has always been an important feature of any war at sea. It constitutes a form of pressure on a country dependent on overseas trade for the necessities of life. These actions are meant to destroy or neutralize not only the enemy shipping at sea and in ports but also such other elements of maritime trade as shipyards/ship-repair facilities, port installations/facilities, and railroad/road traffic in the littorals.

D. Major Naval Operations to Defend/Protect Maritime Trade

Both the stronger and the weaker sides at sea would commit large forces to ensuring an uninterrupted flow of maritime traffic throughout the conflict. Obviously, this operational task is more critical, and also usually more difficult, for the weaker side.

E. Destruction/Protection of Seaborne Nuclear Deterrent Forces

Today only large navies, specifically those of the United States and Russia, have the capability to mount major operations aimed at destroying the enemy's sea-based strategic nuclear forces—that is, against ballistic-missile submarines (SSBNs) and their supporting elements. Such operations might be focused on destruction of the enemy SSBNs, either at their basing areas, during their transits to or from them, or in patrol zones.

F. Major Operations in Support of Ground Forces on the Coast

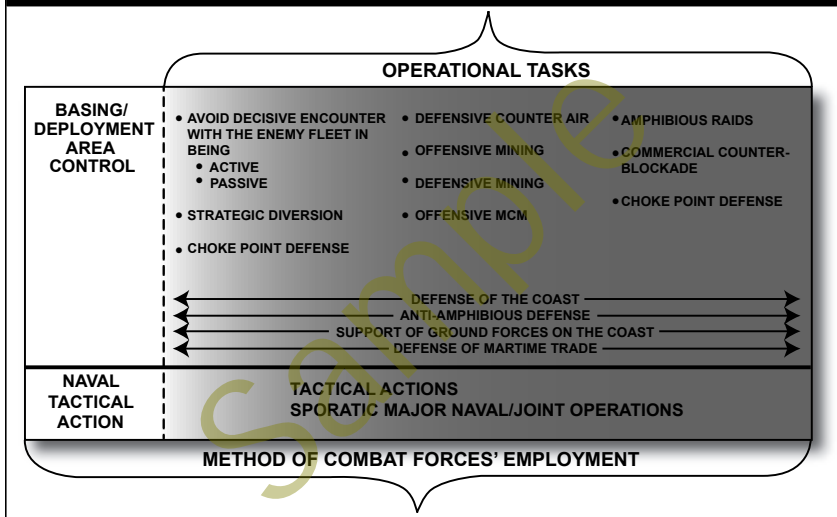
One's naval forces can cooperate with ground forces operating along the coast in both the offense and defense. In the broadest terms, naval forces support troops on the coast by providing cover, support, and supply. Cover means preventing enemy air, missile, or gunnery strikes, or amphibious landings on the flank or in the rear of friendly ground troops. These tasks are accomplished by destroying forces that threaten friendly ground troops from the sea, as well as enemy amphibious forces at their embarkation areas, in transit, and in their landing areas. Support by naval forces encompasses a range of tasks, from destroying important targets on the coast and in the depth of the enemy defenses to attacking maritime traffic in coastal waters flanking troops on the coast. Supply includes transport of troops and materiel; seizure of crossings over water obstacles (straits/narrows, river estuaries, etc.) for friendly troops; and evacuation of troops from beaches, naval bases, or ports.

Sea Denial Dynamics

Ref: NWC 4020A, *On Naval Warfare*, (Dr. Milan Vego, Sept '08), pp. 73-92.

The principal methods used by a weaker side in contesting control in narrow seas range from avoiding the stronger fleet, instituting a counterblockade, and employing strategic diversions, to defending the coast, supporting major defensive operations of ground forces on the coast, and exercising offensive mining and offensive mine countermeasures (MCM). In generic terms, most of these methods would be assigned as operational tasks and would be carried out predominantly by one's naval forces. Other operational tasks would require employing multiservice combat arms. In the littorals, land-based air would often have a decisive role in the successful execution of all operational tasks. The principal methods of combat force employment in disputing enemy sea control would be tactical actions. Some major defensive operations in support of one's own ground forces on the coast and in defense of maritime trade could also be conducted in a typical narrow sea.

Sea Denial Dynamics



Ref: NWC 4020A, *On Naval Warfare*, fig. 3, p. 74.

Avoiding Engagement with the Stronger Fleet

A weaker fleet whose ultimate objective is to obtain control in a certain sea or ocean area should normally try to avoid any decisive encounter with the stronger fleet until the balance of forces turns in its favor. Historically known as the "fleet-in-being," this method of disputing sea control has often been applied by a weaker navy.

The stronger fleet must watch over enemy bases, and its main force must stay in a high state of combat readiness in order to attack the weaker fleet when it comes out. As long as the weaker fleet is undefeated, its very existence constitutes a permanent menace to the stronger fleet's control of the sea. In theory, an "active" fleet-in-being can eventually defeat a stronger fleet and thereby secure sea control for itself.

Naval Counterblockade

A weaker side bordering a narrow sea usually resorts to establishing a counterblockade to neutralize or sometimes to nullify the effects of a blockade imposed by a stronger power. Some theoreticians consider a counterblockade a form of "sporadic warfare" at sea.

In general, the actions of a blockaded country are aimed at lifting either a naval or a commercial blockade. Success against the enemy naval blockade means the resolution of both tasks. By conducting a naval counterblockade, a weaker fleet is usually unable to obtain the necessary degree of sea control in a given area. This is a more difficult problem for a fleet operating within the confines of a narrow sea because of its usually unfavorable base of operations regarding free access to another sea or open ocean. Actions to break through a naval blockade are primarily directed toward allowing one's naval forces access to the open ocean so that they can accomplish their assigned tasks. Another objective is to reestablish the country's links to overseas commerce. One's naval forces are normally employed in cooperation with the other services. A blockaded fleet can choose to contest an enemy naval blockade by breaking through the blockading line with part of its surface forces or submarines. A weaker fleet can also hope, under favorable circumstances, to force the straits or narrows defended by a blockading fleet.

Commerce Raiding

In contrast to attacks against merchant shipping, commerce raiding (*guerre de course*) is purely directed against enemy merchant shipping. This is often the most logical course of action for a weaker fleet. A fleet conducting commerce raiding essentially prolongs the conflict. The main objective of commerce raiding is not to cause the economic ruin of the stronger opponent at sea, but to inflict as much damage as possible on his maritime trade. Commerce raiding succeeds even when conducted on a very small scale, by pushing up marine insurance rates and freight costs. It also might lead the adversary to abandon some of his economic activity.

Defense of the Coast

Defense of one's coast is one of the operational tasks conducted by the weaker side at sea. This task is closely related to the navy's other tasks in war at sea: establishing and maintaining basing/deployment area control. Defense of one's coast is generally much more critical and more difficult to accomplish for a side contesting control because of the stronger side's ability to project its power ashore at the place and time of its own choosing. Generally, this task is not vital for a forwardly deployed blue-water navy when operating in the littorals far from its country's shores.

Defensive Mining

The defense of the coast in general, including one's naval bases and ports, and sea traffic in coastal waters depends to a large degree on the defensive use of mines. Mine barriers intended to prevent enemy movements to and from a sea's only exit or to significantly reduce an enemy's ability to use a major part of an enclosed or semienclosed sea represent the operational employment of mines by a weaker navy. Minefields and mine banks, in contrast, are used in smaller parts of one's coastal waters or offshore islands for a specific tactical purpose. Defensive mining is intended to deny the enemy access to the operating areas of one's surface forces and submarines, naval bases and ports, possible landing beaches, and important straits/narrows and channels, and to protect seaward flanks of one's sea routes in coastal waters. Defensive mine barriers are usually larger in physical scope and number of mines laid than offensive mine barriers.

Offensive Mine Countermeasures (MCM)

Offensive MCM is designed to prevent or neutralize enemy minelaying capabilities in a given sea or ocean area. Normally, efforts should be made to destroy or disable enemy mines before they are laid. Specifically, offensive MCM is directed at destroying enemy minelaying platforms at sea or in their bases, and mine production and storage facilities on the coast. One's forces could conduct offensive mining of enemy ports and thereby prevent enemy surface minelaying platforms from existing and laying mines. Offensive MCM also includes strikes by one's land-based or carrier-based aircraft against selected mine-related targets on the coast or in the country's interior. Mining can also be considered as a part of offensive MCM if directly attacking minelaying assets or mine stockpiles is not possible.

I. MHQ / Maritime Operations Center (MOC)

Ref: NWP 3-32, Maritime Operations at the Operational Level of War (Oct '08), chap. 7 and NTTP 3-32.1, Maritime Operations Center (Oct '08), chap. 1.

This chapter will discuss the maritime headquarters with maritime operations center (MHQ with MOC) organization structure and the functions it supports. It will briefly examine the methodology utilized to coordinate the simultaneous actions the maritime operational level command staff may execute to support the commander.

I. The Maritime Headquarters (MHQ)

The staff of an operational maritime command and its associated support infrastructure is collectively known as a MHQ. Today's Navy operational level staffs must continuously balance operational and fleet management (Title 10), routine administrative Navy administrative control (ADCON), responsibilities. Accordingly, the MHQ organization must address fleet management and operational responsibilities. Navy and joint operational organizational constructs are different.

- The Navy organizational construct is based upon a hierarchical command structure (pyramid) with established communication paths from subordinate to senior officers/commands. Each level in the Navy structure is expected to review information, determine its relevance with respect to other information, and provide interpretation and recommendation to higher levels within the organization. This organizational construct is commonly referred to as a Napoleonic organizational construct.
- The joint operational construct is matrix based, with the traditional Napoleonic organizations providing resources to product teams, thereby accelerating the commander's decision processes. Product teams are categorized as boards, bureaus, cells, centers, and working groups (B2C2WGs), depending on the product being provided to the headquarters and the duration that the team will exist.

Adherence to guidance contained herein and MHQ with MOC tactics, techniques, and procedures will ensure standardized staff functions and processes that enable interoperability with the joint community and commonality across all fleet and principal headquarters. To continually address fleet management and operational responsibilities the MHQ with MOC organization must be:

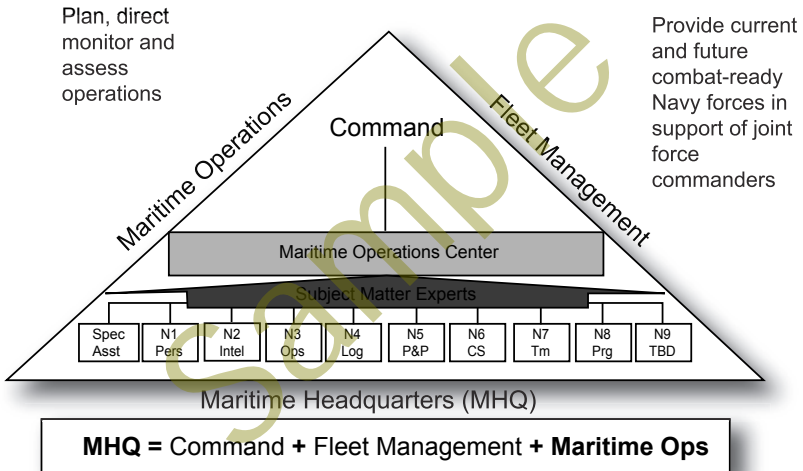
- **Flexible** — capable of adjusting to changing priorities, whether fleet management or operational
- **Tailorable** — capable of smoothly transitioning as the commander is assigned different roles
- **Scalable** — capable of integrating additional capacity or capabilities in response to new missions.

Each MHQ with MOC organizational structure has the same three basic organizational structures: command, fleet management, and maritime operations. Each of these structures is briefly described below, and will be discussed in greater detail in follow-on paragraphs. The commander retains the authority to modify his staff structure as necessary to accomplish the mission. The mission determines what tasks the command is expected to accomplish. These tasks determine how the commander organizes or adapts his staff to support mission accomplishment. The basic staff structure provides the flexibility to make such modifications, while simultaneously maintaining a structure that individuals outside the command can easily understand

C. Fleet Management and Operational Structures (Maritime Headquarters)

Ref: NWP 3-32, *Maritime Operations at the Operational Level of War* (Oct '08), pp. 7-4 to 7-14.

The fleet management structure of the MHQ includes the special assistants to the commander plus the N1 (personnel), N2 (intelligence), N3 (operations), N4 (logistics), N5 (plans and policy), N6 (communications information systems), N7 (training), and N8 (programs) directorates. Based on mission requirements and the nature of the operational environment, the commander commonly establishes additional staff directorates. For instance, an N9 directorate may be responsible for civil-military issues, concept development, and experimentation, or another area that requires the command's attention. The focus of the fleet management module is the readiness of the assigned and attached Navy forces (NAVFOR). This focus covers the operational near-, mid-, and far-time horizons and long-term input to the Navy service as a whole. It requires knowledge of today's operational environment and the projected environment, plus Navy polices and procedures for the manning, equipping, and training of Navy forces.



Ref: NWP 3-32, *Maritime Ops at the Operational Level of War*, fig. 7-3, p. 7-14.

The fleet management module is organized based on the "Napoleonic Structure," with the staff organized into directorates with each directorate having a specific responsibility. In the Navy, directorates are prefaced with the letter "N"; the Marines preface directorate numbers with the letter "G" on staffs whose commander is a general officer. Otherwise, Marine directorate numbers are prefaced with an "S" (regiment level and below). The use of standard directorate assignments enhances external headquarters' communication with the MHQ:

- **N0** Special Assistants to the Commander
- **N1** Personnel
- **N2** Intelligence
- **N3** Operations
- **N4** Logistics
- **N5** Plans and Policy
- **N6** Communications Information Systems
- **N7** Training
- **N8** Programs
- **N9** TBD

The MHQ with MOC ensures Navy operational commanders are able to execute at the operational level. Maintaining the fleet management Napoleonic structure provides the deliberate staffing environment required to properly man, equip, and train Navy forces. Additionally, it provides an organizational structure that external commands understand, allowing staff quick access to expertise to promote interoperability. Organizing the MOC following the B2C2WG flattened organizational construct to plan and execute assigned missions greatly speeds planning and decision making by aligning with the JTF staff model. Additionally, by following this standard model, coordination with other component commanders and transforming to the various joint roles that may be assigned will be made easier. Reach back, or support from or to other similarly organized MOCs, will be facilitated and the utility of schoolhouse training programs maximized through standardization.

MANPOWER & PERSONNEL DIRECTORATE (N-1)	ADMINISTRATIVE AND PERSONNEL CELL LIAISON CELL
INTELLIGENCE DIRECTORATE (N-2)	MARITIME INTELLIGENCE OPERATIONS CENTER INTELLIGENCE PLANS/INTELLIGENCE PREPARATION OF THE OPERATIONAL ENVIRONMENT (IPOE) INTELLIGENCE OPERATIONS COUNTERINTELLIGENCE (CI)/HUMAN INTELLIGENCE (HUMINT) INTELLIGENCE SUPPORT ELEMENT JOINT COLLECTION MANAGEMENT BOARD
OPERATIONS DIRECTORATE (N-3)	FLEET COMMAND CENTER CURRENT OPERATIONS CELL FUTURE OPERATIONS CELL FIRES ELEMENT INFORMATION OPERATIONS CELL MARITIME ASSESSMENT GROUP INFORMATION MGT OFFICER KNOWLEDGE AND INFORMATION MANAGEMENT (KIM) BOARD KIM WORKING GROUP STRATEGIC COMMUNICATION WORKING GROUP METEOROLOGICAL AND OCEANOGRAPHIC (METOC) CELL RULES OF ENGAGEMENT (ROE)/RULES FOR THE USE OF FORCE (RUF) WORKING GROUP PROTECTION WORKING GROUP
LOGISTICS DIRECTORATE (N-4)	LOGISTICS READINESS CENTER DEPLOYMENT AND DISTRIBUTION CELL LOGISTICS PLANS AND READINESS CELL MAINTENANCE CELL FACILITIES AND ENGINEERING CELL SUSTAINMENT AND SERVICES CELL HOST NATION SUPPORT CELL HEALTH SERVICE SUPPORT CELL
PLANS AND POLICY DIRECTORATE (N-5)	MARITIME PLANNING GROUP OPERATIONAL PLANNING TEAMS JOINT OPERATION PLANNING AND EXECUTION SYSTEM (JOPES) CELL RED CELL
COMMUNICATIONS AND INFORMATION SYSTEMS (CIS) DIRECTORATE (N-6)	CIS CENTER COMMUNICATIONS SYSTEM (CS) CURRENT OPERATIONS (COPS) CELL CS PLANS CELL CS MOC/HQ SUPPORT CELL

Ref: NWP 3-32, *Maritime Ops at the Operational Level of War*, fig. 1-4, p. 1-7.

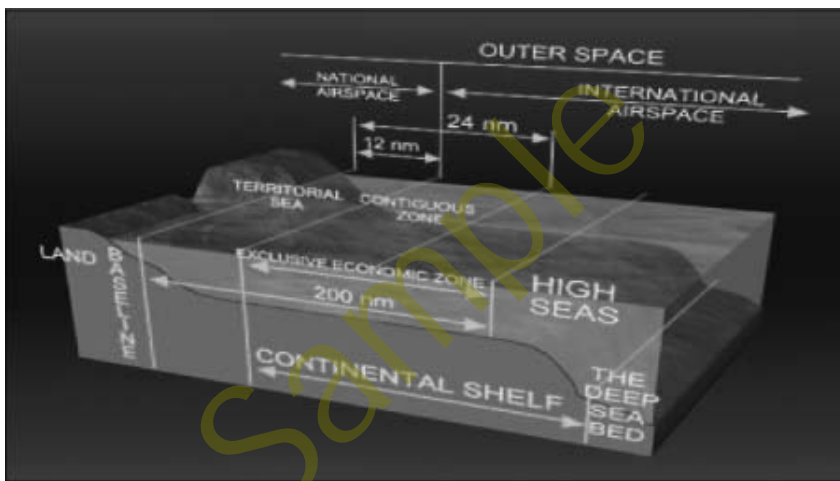
The MOC's B2C2WG structure, organization, and staffing will vary depending upon the mission assigned, the operational environment, the makeup of existing and potential adversaries or nature of the crisis (e.g., combat operations, tsunami, cyclone, earthquake), and the time available to reach the desired end state.

II. Maritime Domain Awareness (MDA)

Ref: NWP 3-32.1, *Maritime Operations Center* (Oct '08), pp. 1-7 to 1-15.

Maritime domain awareness (MDA) is “the effective understanding of anything associated with the global maritime domain that could impact the security, safety, economy, or environment of a nation” (JP 3-32, *Command and Control for Joint Maritime Operations*, Change 1, 27 May 2008) and is essential in all maritime activities. Maritime domain awareness is one of eight interdependent supporting plans to the National Strategy for Maritime Security and can only be achieved through the combined efforts of Federal, state, and local government agencies, international governments, and commercial and private enterprise. Maritime domain awareness is achieved by collecting, fusing, and analyzing relevant data and disseminating this information to commanders and other Department of Defense (DOD) and interagency decision makers in a timely manner to enhance operational decision-making processes and support of operational plans, including the Maritime Operational Threat Response Plan (MOTR).

See p. 2-17 for discussion of the *Maritime Operational Threat Response (MOTR) plan*.



Ref: NWP 3-32.1, *Maritime Operations Center*, fig. 1-9, p. 1-14.

MOCs persistently monitor the maritime domain to identify potential and actual maritime threats in a timely fashion, to enhance operational-level decision-making processes, and in support of operational plans. The primary method for information sharing, situational awareness, and collaborative planning in the maritime domain is through a global maritime common operational picture (COP). The global maritime COP is developing into a near-real time, dynamically tailorable, network-centric virtual information grid shared by U.S. Federal, state, local agencies and international partners with maritime interests and responsibilities providing the means to monitor activities, identify trends, and differentiate anomalies. Global maritime COP data will be accessible to all users within the limits of security, policy, or regulations.

Maritime operations centers contribute to the active layered defense of U.S. and international interests in a number of vital ways. Key among them is providing input to the global maritime COP concerning matters and events within the commander’s assigned operational area. The COP encompasses all oceans, from inland waters to the high seas. As an element of a global MDA network, each MOC contributes information from its operating area that enhances awareness for the collective organizations.

See pp. 2-4 to 2-5 for further discussion of the maritime domain.

MOC staffs must be aware of and plan and position forces to be able to respond to a variety of threats. Although not all-inclusive, threats in the maritime domain include: terrorism, piracy, oil theft, smuggling, drug trafficking, human trafficking, wildlife trafficking, weapons trafficking, environmental degradation, illegal immigration, fisheries violations, and organized crime activities.

Maritime Domain Awareness Goals

Maritime domain awareness serves to unify U.S. government efforts and support international efforts to achieve MDA across the Federal government, with the private sector and civil authorities within the United States, and with allies and partners. It requires close coordination of a broad range of Federal departments and agencies for this lasting endeavor. Maritime domain awareness goals are to:

- Enhance transparency in the maritime domain to detect, deter, and defeat threats as early and as distant from U.S. interests as possible
- Enable accurate, dynamic, and confident decisions and responses to the full spectrum of maritime threats
- Support law enforcement agencies to ensure freedom of navigation and the efficient flow of commerce

Maritime Domain Awareness Process and Functions

The MDA process, in support of Navy and joint operations, is relevant throughout the ROMO. The MDA process can be separated into five functions -- which support MOC planning functions -- all focused to support the commander's decision-making cycle:

- Monitoring
- Collection
- Fusion
- Analysis
- Dissemination

Maritime Domain Awareness Critical Tasks

Fleet MDA tasks have been derived from the Universal Joint Task List (UJTL) and the Universal Naval Task List (UNTL). These tasks apply to commanders at the strategic, operational, and tactical levels. Many of these tasks are intelligence-related and provide relevant information to enable command and control and planning, as well as other tasks shared by intelligence and operations staffs. This is not meant to imply that MDA is solely an intelligence function. The following overarching MDA critical tasks apply to the five functions:

- Direct operational intelligence activities
- Acquire and communicate operational level information and status
- Provide and monitor a common operational picture
- Prepare plans and orders
- Assess the operational situation
- Command subordinate operational forces
- Synchronize employment of forces and functions
- Coordinate and integrate joint/multinational and interagency support
- Collect and share operational information
- Process and exploit collected operational information
- Acquire and communicate operational level information and status
- Produce operational intelligence and prepare intelligence products
- Evaluate intelligence activities in the area of operations (AO)
- Disseminate and integrate operational intelligence



Index

A

Acquisition, 6-4
Aegis, 2-16
Afloat Support, 6-25
Air Mobility Command (AMC), 1-41, 6-29
Air Superiority, 2-22
Air Tasking Order (ATO), 2-57
Aircraft Carriers, 1-8
Airspace Coordinating Order (ACO), 2-57
Airspace Management, 4-9
Alliance, 2-71
Allocated, 2-39
American Embassy, 7-7
Amphibious Operations, 2-52, 2-61
Amphibious Ready Group (ARG), 1-4
Amphibious Warfare, 1-14
Analyze Available Forces and Assets, 5-26
Analyze the Higher Commander's Mission, 5-20
Antisubmarine Warfare (ASW), 2-54
Apportioned, 2-39
Area of Operations (AO), 2-7, 2-46
Assess, 4-15
Assigned, 2-39
Assumptions, 5-50
Attached, 2-39
Attack on Maritime Trade, 2-30
Availability of Forces, 2-39, 5-26
Aviation Combat Element (ACE), 1-21

B

B2C2WG, 3-6
Backbrief, 5-72
Ballistic Missile Defense (BMD), 2-16

Basing/Deployment Area Control, 2-22
Battle Damage Assessment (BDA), 4-22
Battle Rhythm, 3-8
Battlefield, 2-7
Battlespace, 2-7
Battlespace Management, 4-10
Bilateral Exercises, 7-12
Boards, Bureaus, Centers, Cells, and Working Groups (B2C2WG), 3-6
Building Capabilities, 7-9, 7-12
Building Capacity, 7-9, 7-15
Building Relationships, 7-9, 7-10

C

Campaigns, 2-13
Carrier Air Wing (CVN), 1-8
Carrier Strike Group (CSG), 1-4, 3-28
Centers of Gravity, 5-26
Choke-Point Control, 2-22
Civil Reserve Air Fleet (CRAF), 1-44
Civil-Military Coordination, 2-74
Civil Support Operations, 2-12
Coalition, 2-71
Collateral Damage, 3-33
Combat Assessment (CA), 2-57, 4-22
Combatant Command (COMCOM/CCDR), 2-34, 2-37
Command and Control, 3-11
Command and Control Relationships, 2-34, 5-39
Command Authority 2-36
Command Element (CE), 1-21
Command Structure, 1-2, 2-68
Commander's Critical Information Requirements (CCIR), 4-12, 5-30
Commander's Decision Cycle, 4-14
Commander's Initial Guidance, 5-19
Commander's Intent, 5-21
Commander's Planning Guidance, 5-32
Commercial Blockade, 2-31
Communications, 4-15
Composite Warfare Commander (CWC), 2-65, 3-27
Concept of Operation (CONOPS), 5-66
Confirmation Brief, 5-76
Contiguous Zone, 3-31
Continuing Activities, 4-8
Control Areas, 3-24
Counter Drug, 7-14
Counter Proliferation, 7-14
Counterintegrity, 2-12, 7-15
Counterterrorism, 2-12, 7-15
Course of Action Analysis (Wargaming), 5-47
Course of Action Comparison, 5-60
Course of Action Development, 5-35
Course of Action Evaluation, 5-61
Course of Action Options, 5-38
Crisis Response Operations, 2-13
Critical Events, 5-50
Critical Factors, 5-26
Crosswalk, 5-72
Cultural Awareness, 7-7
Current Operations (COPS), 5-75
Customs, 7-9
Cyber Warfare, 2-16

D

Decision Brief, 5-64
Decisive Points, 5-26
Defense of Maritime Trade, 2-31
Defense Supply System, 6-27
Defense Support to Public Diplomacy, 7-11
Defense Transportation System (DTS), 6-29
Defensive Posture, 2-19
Design, 5-14
Deterrence, 2-13
Direct, 4-15
Disposition, 6-5
Distribution, 6-4
Doctrine, 2-1

E

Effects, 5-4
End State, 5-25, 5-28
Environmental Law, 3-36
Essential Tasks, 5-22
Establishing Authority, 2-41
Evaluation Guidance, 5-41
Event Horizons, 4-18, 5-14
Exclusive Economic Zone (EEZ), 3-31
Execution, 4-11
Exercises, 7-12
Exercise-Related Construction, 7-13
Expeditionary Strike Force, 3-28
Expeditionary Strike Group (ESG), 3-28
Externally Imposed Limitations, 5-23

F

Fires, 2-56, 3-11
Focused Logistics, 6-10
Force Projection, 1-39, 6-33
Foreign Flag Ships, 1-43
Strategic Deployment, 1-44
Foreign Humanitarian Assistance (FHA), 2-12
Forward Logistics Site, 6-31
Framing the Problem, 5-14, 5-15

Friendly Force Information Requirements (FFIRs), 5-20
Friendly Forces, 5-50
Full Command, 2-35
Functional Component Commander, 2-44
Functional Coordinators, 2-70
Future Operations (FOPS), 5-75
Future Plans Center (FPC), 5-75

G

Global Command and Control System (GCCS), 6-26
Global Force Management (GFM), 1-2, 2-39
Global Response Forces (GRF), 1-25
Governing Factors, 5-51
Ground Command Element (GCE), 1-21

H

High Seas, 3-31
High Yield Logistics (HYL), 6-8
Higher Headquarters, 5-18
Homeland Defense, 2-12
Hub and Spoke Concept, 6-30
Humanitarian Assistance/Disaster Relief (HA/DR), 3-36, 7-10

I

Implied Tasks, 5-22
Information Sharing, 7-13
Initial Commander's Intent, 5-28
Initial Risk Assessment, 5-27
Integrated Command Structure, 2-69
Integrating Processes, 4-8
Intelligence, 3-12, 7-13
Intelligence Preparation of the Operational Environment (IPOE), 4-8, 5-8, 5-56, 5-66

Intelligence, Surveillance, and Reconnaissance (ISR), 2-53, 4-9
Internal Waters, 3-31

J

Joint Deployment Process, 1-45
Joint Force Commander (JFC), 2-38
Joint Force Components, 2-37
Joint Force Maritime Component Commander (JFMCC), 2-44, 2-45
Joint Maritime Operations Targeting, 2-58, 3-33
Joint Operation Planning and Execution System (JOPEs), 5-5
Joint Operations Area (JOA), 2-7
Joint Operational Areas, 2-6
Joint Operations Rehearsals, 4-10
Joint Task Force (JTF), 2-38

L

Law of Armed Conflict, 3-29
Lawful Combatants, 3-33
Lead Nation, 2-69
Legal Regimes of Oceans and Airspace, 3-27
Level of Control, 3-21
Levels of Maritime Command, 2-33
Levels of War, 2-9
Liaison, 5-7
Limitations, 5-23
Limited Contingency Operations, 2-13
Logistics, 6-1
Logistics Combat Element (LCE), 1-21
Logistics Command and Control Systems, 6-19
Logistics Information Systems, 6-26
Logistics Pipeline, 6-32
Logistics Planning Considerations, 6-18
Logistics Planning Process, 6-12

M

Major Naval Operations, 2-14
Major Operations, 2-13
Marine Air/Ground Task Force (MAGTF), 1-21
Marine Corps Reserve, 1-20
Marine Corps Supply System, 6-28
Marine Expeditionary Brigade (MEB), 1-23
Marine Expeditionary Force (MEF), 1-22
Marine Expeditionary Unit (MEU), 1-4, 1-21, 1-24
Marine Special Operations Forces, 1-38
Maritime Administration (MARAD), 1-42, 6-29
Maritime Battlefield, 2-7
Maritime Battlespace, 2-7
Maritime Campaign, 2-14
Maritime Control Area, 2-7
Maritime Domain, 2-4
Maritime Domain Awareness (MDA), 1-30, 3-22
Maritime Headquarters (MHQ), 3-1
Maritime Interception Operations (MIO), 2-52
Maritime Law, 3-25
Maritime Operational Command, 3-19
Maritime Operational Threat Response (MOTR), 2-17
Maritime Operations, 2-1, 2-9
Maritime Operations Center (MOC), 2-51, 3-1
Maritime Repositioning Force (MPF), 1-25
Maritime Security, 7-14
Maritime Security Regimes, 1-30
Maritime Superiority, 2-1
Maritime Supremacy, 2-1
Maritime Theater Structure, 2-7
Maritime Trade, 2-15
Maritime Trade, 2-30, 2-32
Maritime Warning Zones, 3-32
Measure of Effectiveness (MOE), 4-19

Measure of Performance (MOP), 4-19
Method, 5-25, 5-28
Military Engagement, 2-13
Military Sealift Command (MSC), 1-41, 6-29
Military Surface Deployment and Distribution (SDDC), 1-41
Military Traffic Management Command (MTMC), 6-29
Mine Warfare, 1-6
Mission Analysis, 5-17
Mission Commander, 7-9
Mission Statement, 5-21
Monitor, 4-15
Movement and Maneuver, 2-52, 3-13
MSC Support Ships, 1-16
Multinational Command, 2-72
Multinational Operations, 2-71
Multinational Training, 7-14
Munitions Effectiveness Assessment (MEA), 4-22

N

Narrow Seas, 2-23
National Command, 2-71
National Defense Reserve Fleet (NDRF), 1-42
NATO Organization, 6-24
Naval Attack, 2-14
Naval Aviation, 1-8
Naval Battle, 2-14
Naval Fleet Auxiliary Force (NFAF), 1-5, 1-16
Naval Logistics, 6-1
Naval Operations, 2-19
Naval Raid, 2-14
Naval Special Warfare (NSW), 1-33
Naval Strike, 2-14
Naval Supply System, 6-27
Naval Theater Distribution, 6-27
Naval Transportation System, 6-28
Navy Command, 2-8
Navy Planning, 5-1
Navy Planning Process (NPP), 4-5, 5-2

Navy Rehearsals, 4-10
Navy Reserve, 1-18
Non Time-Sensitive Planning, 5-2
Interagency, Intergovernmental & NGOs, 2-70, 7-16
Numbered Fleets, 1-2

O

Objectives, Naval, 2-19
Offensive Mining, 2-31
Officer in Tactical Command (OTC), 2-66, 3-27
Open Ocean, 2-23
Operating Forces, 1-2, 1-20
Operation Plans & Orders, 5-71
Operational Approach, 5-15
Operational Area, 2-7
Operational Art, 5-10
Operational Command (OP-COM), 2-35
Operational Control (OP-CON), 2-34, 2-35
Operational Design, 5-11
Operational Factors, 2-20
Operational Law (OPLAW), 3-25
Operational Level of Command (OLC), 2-8, 3-20
Operational Logistics (OPLOG), 6-2, 6-11
Operational Protection, 4-9
Operational-Level Functions, 3-10, 3-20
Operations Process, 4-1
Orders, 5-67

P

Peace Operations, 2-12
Piracy, 3-31
Plan, 4-15
Planning, 4-5
Planning Horizons, 5-14
Planning Assumptions, 5-27
Planning Team 5-74
Planning Team, 5-6
Plans and Orders, 5-67
Port Visits, 7-11
Ports, Waterways & Coastal Security (PCWS), 1-30
Preparation Activities, 4-9

- Preparation, 4-7
- Prepositioning Ships, 1-16
- Primary Hubs Ashore, 6-30
- Principal Headquarters, 1-3
- Principle Warfare Commanders (PWC), 2-68
- Priority Information Requirements (PIRs), 5-20
- Projecting Power Ashore, 2-26
- Protection, 3-13
- Protection of Maritime Trade, 2-31
- Purpose, 5-23, 5-25, 5-28

- R**
- Ready Reserve Force (RFF), 1-42
- Reattack, 4-23
- Red Cell, 5-53
- Reframe the Problem, 5-16
- Rehearsals, 4-10
- Relative Combat Power, 5-36
- Replenishment at Sea, 6-31
- Right of Visit, 3-34
- Risk Assessment, 4-16
- Risk Management, 4-17
- Rules For the Use of Force (RUF), 3-26
- Rules of Engagement (ROE), 3-26, 7-15

- S**
- Sea Control, 2-19, 2-24
- Sea Denial, 2-27
- Sea-Air-Land (SEAL) Teams, 1-36
- Sea-Based Logistics, 6-9
- Seaborne Nuclear Deterrent Forces, 2-15
- Sealift Program, 1-16
- Secondary Hubs Ashore, 6-31
- Security, 4-9
- Security Assistance, 7-3
- Security Cooperation, 2-13, 7-2
- Security Force Assistance (SFA), 7-13, 7-15
- Self-Defense, 3-35
- Service Component Commander, 2-42
- Seven-Minute Drills, 3-17
- Shore Forces, 1-2
- Shore-Based Support, 6-25
- Single Port Manager (SPM), 1-46
- Situational Understanding, 4-12
- Small Vessel Security Strategy (SVSS), 1-31
- Special Marine Air/Ground Task Force (SPMAGTF), 1-24
- Special Mission Ships (SMS), 1-16
- Specified Tasks, 5-22
- Staff Estimates, 5-7, 5-19, 5-56
- Staff Transition, 3-16
- Strategic Communication, 7-6
- Strategic Lift, 1-39
- Strategic Offensive Posture, 2-19
- Subject Matter Expert Exchanges, 7-11
- Submarine Forces, 1-12
- Submarine Operating Authority (SUBOPAETH), 2-55
- Subordinate Unified Command, 2-37
- Support Situations (SUPSITs), 3-27
- Supporting Establishment, 1-20
- Surface Combatants, 1-10
- Surface Strike Group (SSG), 1-5, 3-28
- Sustainment, 3-14, 6-5
- Synchronization Matrix, 5-64

- T**
- Tactical Command (TACOM), 2-35
- Tactical Control (TACON), 2-34, 2-35
- Tactical Distribution, 6-32, 6-34
- Tactical Headquarters, 2-64
- Tactical Operations, 2-14
- Targeting, 2-58, 3-33, 4-9
- Task Elements, 3-26
- Task Forces, 1-3, 3-26
- Task Groups, 3-26
- Task Organization, 2-62
- Task Units, 3-26
- Task List Libraries, 5-23
- Tenth Fleet, 2-18
- Terrain Management, 4-9
- Territorial Sea, 3-31
- Terrorism, 1-31
- Theater ASW Commander (TASWC), 2-55
- Theater Distribution, 6-27
- Theater of Operations, 2-7
- Theater Security Cooperation (TSC), 7-1, 7-3
- Theater Structure, 2-7
- Time-Sensitive Planning, 5-2
- Training, 7-13
- Transition, 5-73
- Transition Drills, 5-76

- U**
- U.S. Coast Guard, 1-27
- U.S. Cyber Command (USCYBERCOM), 2-16
- U.S. Flag Fleet, 1-42
- U.S. Marine Corps, 1-19
- U.S. Marine Corps Special Operations Forces, 1-38
- U.S. Maritime Administration (MARAD), 1-42, 6-29
- U.S. Navy, 1-1
- U.S. Special Operations Command (USSOCOM), 1-34
- U.S. Tenth Fleet, 2-18
- U.S. Transportation Command (USTRANSCOM), 1-40
- Undersea/Antisubmarine Warfare (USW/ASW), 2-54
- Unified Action, 2-11
- Unified Command, 2-37
- Unit-Level Exercises, 7-12

- W**
- Wargaming, 5-47
- Wargaming Methods, 5-51
- Warning Order, 5-34
- Waterspace Management (WSM), 2-53, 4-9



The Essentials of Warfighting Military SMARTbooks

SMARTbooks - The Essentials of Warfighting! Recognized as a doctrinal reference standard by military professionals around the world, SMARTbooks are designed with all levels of Soldiers, Sailors, Airmen, Marines and Civilians in mind.



dept of defense

air force

navy

marines

army

coast guard

joint staff

interagency

multinational

www.TheLightningPress.com

SMARTbooks can be used as quick reference guides during actual tactical combat operations, as lesson plans in support of training exercises and as study guides at military education and professional development courses. Serving a generation of warfighters, military reference SMARTbooks have become "mission-essential" around the world:

- Military education and professional development courses/schools: officer and noncommissioned officer basic and advanced courses, NCO Academy, Command & General Staff College (CGSC), Intermediate Level Education (ILE), Joint Forces Staff College (JFSC), War College, West Point and ROTC
- National Training Center (NTC), Joint Readiness Training Center (JRTC) and Battle Command Training Program (BCTP)
- Active, Reserve and Guard units across the full-spectrum of operations
- Global War on Terrorism operations in Iraq, Afghanistan and the Asia-Pacific
- Combatant Command (COCOM) and JTF Headquarters around the world
- Allied, coalition and multinational partner support and training to include NATO, Iraq and the Afghanistan National Army

SMARTpurchase!

www.TheLightningPress.com

View, download samples and purchase SMARTbooks online at: www.TheLightningPress.com. Register your SMARTbooks to receive email notification of SMARTupdates, new titles & revisions!



The Joint Forces Operations & Doctrine SMARTbook (2nd Rev. Ed.)

Guide to Joint, Multinational & Interagency Operations



The Army Operations & Doctrine SMARTbook (4th Rev. Ed.)

Guide to FM 3-0 Operations & the Six Warfighting Functions



The Naval Operations & Planning SMARTbook

Guide to Designing, Planning & Conducting Maritime Operations



The Stability, Peace & Counterinsurgency SMARTbook

Nontraditional Approaches in a Dynamic Security Environment



The Battle Staff SMARTbook (3rd Rev. Ed.)

Guide to Designing, Planning & Conducting Military Operations



The Small Unit Tactics SMARTbook (First Edition)

Leader's Reference Guide to Conducting Tactical Operations



The Leader's SMARTbook (3rd Rev. Ed.) With Change 1 (FM 7-0 SMARTupdate)

Military Leadership & Training for Full Spectrum Operations



The Sustainment & Multifunctional Logistician's SMARTbook (2nd Rev. Ed.)

Warfighter's Guide to Logistics, Personnel Services, & Health Services Support



Web: www.TheLightningPress.com
E-mail: SMARTbooks@TheLightningPress.com



24-hour Voicemail/Fax/Order:
Record or fax your order toll-free at 1-800-997-8827



Mail, Check & Money Order:
2227 Arrowhead Blvd., Lakeland, FL 33813

SMARTbooks

The Essentials of Warfighting

Step-by-step visual approach

Step-by-step approach makes military doctrine and reference as easy as 1-2-3. Dozens of charts and diagrams show you exactly what you need to know.

Comprehensive quick reference guide

Look up what you need and then get straight to work. SMARTbooks are written from the warfighter's perspective, concentrating at the tactical & operational levels of war. Compiled directly from the latest official military publications; complete doctrinal references are provided for documentation.

Straightforward

Written in simple language that gets straight to the point. Thousands of pages were condensed to provide concise information in a single SMARTbook.

Portability means accessibility

Taking the place of multiple field manuals and publications, SMARTbooks fit easily into a leader's bag, the back of a rucksack, or even the cargo pocket of ACUs.

SMARTregistration

Keep your SMARTbook up-to-date with e-mail notification of updates and doctrinal changes. Register online at: www.TheLightningPress.com

Guide to Designing, Planning & Conducting Maritime Operations

The **U.S. Navy** is an instrument of national power, employed to prevent conflict and, if necessary, prevail in war. It is organized, trained and equipped primarily to fight at and from the sea and to influence events on land.



Design is a methodology for applying critical and creative thinking to understand, visualize, and describe complex, ill-structured problems and develop approaches to solve them.

Military planning, and by extension Navy planning, is the process by which a commander visualizes an end state and then determines the most effective ways by which to reach the end state.

Execution is putting a plan into action by applying combat power to accomplish the mission and using situational understanding to assess progress and make execution and adjustment decisions.

Assessment is the continuous monitoring and evaluation of the current situation and the progress of an operation. Commanders direct adjustments, thus ensuring the operation remains focused on accomplishing the mission.

Designed for all levels of Soldiers, Sailors, Airmen, Marines & Civilians

The Lightning Press



Military Reference
SMARTbooks
24-hour Voicemail/Fax/Order:
1-800-997-8827

www.TheLightningPress.com

ISBN 13: 978-0-9824859-5-8



9 780982 485958