EXPEDITIONARY STRIKE GROUP SUPPORT TO LONG RANGE RAIDS

CPG-2 TACMEMO 3-02.1.1-04

DEPARTMENT OF THE NAVY
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Purpose CPG-2 TACMEMO 3-02.1.1-04, EXPEDITIONARY STRIKE GROUP (ESG) SUPPORT TO LONG RANGE RAIDS (U) is designed as a guide to provide available information essential for the long-range raid planning process. This publication should be used in conjunction with applicable expeditionary warfare publications, particularly those cited in the bibliography. Throughout this publication, references to other publications imply the effective edition.

This TACMEMO should be employed and referenced at every opportunity in the planning, training, and execution of ESG-Fleet exercises and during real world operations. **Recommended changes, additions, or deletions are encouraged and should be submitted via the Navy Warfare Development Command website (www.nwdc.navy.smil.mil), under "Navy Lessons Learned", "Submit – Lessons Learned" with the title ESG Operations.**

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EXECUTIVE SUMMARY

EX.1 PURPOSE

This Tactical Memorandum (TACMEMO) is intended for use by the Amphibious Squadron (PHIBRON) and Marine Expeditionary Unit (MEU) staffs responsible for the planning and execution of long range raids, but with appropriate tailoring could used for operations with larger Marine Air Ground Task Forces (MAGTFs) or with other services (i.e., when a PHIBRON operates an Afloat Forward Staging Base (AFSB) as in Operation Enduring Freedom). It is intended to supplement, not replace, the proven doctrine of Marine Corp Warfare Publication 3-43.1, *Raid Operations,* by developing tactics, techniques, and procedures (TTPs) for the Expeditionary Strike Group (ESG) to provide Navy support to long range raids. Thus, this TACMEMO focuses on the capabilities of the Navy assets within the ESG to support long range raids.

EX.2 INTRODUCTION

In general, the addition of three guided missile surface ships (with a three to four helicopter detachment) and an attack submarine to the ESG provide a whole new range of capabilities and options for supporting a long range raid. These increased capabilities can provide assets a raid force may need to support a mission that may extend hundreds of miles from the ESG overwater or inland, while simultaneously providing defense of the ESG. The new mix of assets also creates an opportunity to consider new TTPs for providing Navy support to a long range raid. This TACMEMO outlines these capabilities and options.

EX.3 PRINCIPLES AND OPERATIONAL CONCEPTS

Chapter 1 frames the TACMEMO within the assumptions made at the outset and the general capabilities and limitations of the Navy element of an ESG for supporting a long range raid. A brief discussion of the currently uncertain ESG command structure and its role within a complex battlespace follows. Lastly, the chapter defines the approach used in later chapters, which consider Navy support to deep operations, close battle and rear area operations.

EX.4 COMMAND AND CONTROL

Chapter 2 provides a detailed consideration of how the ESG command structures fit into the larger theater context, and its impact on battlespace coordination, Rules of Engagement (ROE), and information management. Taking a top-down look at command structure from the National- to the theater- and ultimately to the ESG-level, the TACMEMO identifies the roles and responsibilities of ESG warfare commanders, resource coordinators, augmentees and liaisions, including likely links to theater-level Joint staffs. An emphasis is placed upon the coordination of the maritime, land and air battlespaces that may be of concern to an ESG's Navy element supporting a long range raid. The coordination issues are underscored by discussions of ROE and information management that must be understood.

EX.5 PLANNING CONSIDERATIONS

Chapter 3 provides broad planning considerations. The considerations are broken down into sections for platforms, functional areas, and final planning. The platforms section considers unique aspects of Navy surface, aviation, and subsurface platforms and how those characteristics may be used to support a long range raid being executed by a MEU. Intelligence and Information Operations/Warfare are the functional areas discussed in this chapter. Lastly, suggestions are provided for Navy input for developing parts of the final plan, such as Go/No Go criteria, the execution checklist, and the confirmation brief.

EX.6 DEEP OPERATIONS, THE CLOSE BATTLE, AND REAR AREA OPERATIONS

Chapters 4 and 5 present further considerations of how the Navy may support a long range raid, and the discussion is grouped around the concepts of deep operations and the close battle (Chapter 4) and rear area operations (Chapter 5). The likely missions to be supported or executed by Navy elements of the ESG further subdivide each chapter. For deep operations or the close battle, the Navy will generally have a supporting role providing alternative to the MEU commander for designing and executing the raid, while rear area operations primarily concern defending the ESG ships, which represents a major role for the Navy element of an ESG. These chapters also consider and highlight the tradeoffs that must be made when trying to support deep operations, the close battle, and rear area operations simultaneously with multi-mission platforms such as a cruiser or destroyer. Chapters

EX.7 TACMEMO EVALUATION

Chapter 6 provides details for any command using and thus evaluating the TTPs set forth in this TACMEMO. Feedback from the Fleet regarding the implementation and use of this TACMEMO is vital to ensuring the eventual inclusion of appropriate TTPs for Navy support of long ranges into Navy Doctrine.

EXPEDITIONARY STRIKE GROUP SUPPORT TO THE LONG RANGE RAID

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CHAPTER 1

Principles and Operational Concepts

1.1 INTRODUCTION

The Navy's transformational processes outlined in "Sea Power 21" serve as a strategy-to-concepts-to-capabilities continuum for greatly enhanced power projection and operational freedom, with three fundamental concepts as its core: "Sea Strike," "Sea Shield," and "Sea Basing." Binding these operational concepts is ForceNet that will serve to integrate war fighters, sensors, command and control, platforms, and weapons into a networked, distributed combat force.

The Navy's Global Concept of Operations implemented Sea Strike, Sea Shield, and Sea Basing and transformed existing force structure into a more flexible force structure by creating Carrier Strike Groups (CSGs), Expeditionary Strike Groups (ESGs), and Surface Strike Groups (SSGs).

The establishment of the ESG provides commanders with a greater ability to support long range raids. The increased capabilities of the Navy part of an ESG may provide assets a raid force can use to support a mission that may extend hundreds of miles from the ESG overwater or inland, while providing defense of the ESG.

The purpose of this Tactical Memorandum (TACMEMO) is to develop tactics, techniques, and procedures for the Navy part of an ESG to support long range raids. The intended audience is the Amphibious Squadron (PHIBRON) and Marine Expeditionary Unit (MEU) staffs responsible for the planning and execution of long range raids. It is intended to supplement, not replace, the proven doctrine of Marine Corp Warfare Publication (MCWP) 3-43.1 *Raid Operations*, which defines a raid to be an operation "conducted to inflict loss or damage on opposing forces, create diversions, and to capture or evacuate individuals and material by swift incursion into or temporary occupancy of an objective followed by expeditious withdrawal." Thus, the focus of this TACMEMO is on the capabilities of the Navy assets within the ESG to support long range raids.

Historically, the majority of Special Operations Capable (SOC) missions conducted by the MEU have occurred at ranges of less than 200 nautical miles (NM). Within this battlespace, the MEU(SOC) has options for surface only, air only, or combined surface and air operations using the full range of its assigned assets. Beyond 200 NM, the MEU is usually limited to an air only option using CH-53E helicopters with some combination of aviation capable ships operating in advance of the main force (i.e., "lily pads"), forward arming and refueling points (FARPs) on the ground, or a KC-130 tanker airborne for refueling. Unless extensive theater tanking assets are employed, 500 NM generally represents the outer range of such operations. Therefore, for the purposes of this TACMEMO, a long range raid is defined as one where the distance from the ESG to the objective is between 200 and 500 NM.

This chapter provides a basic overview of the principles and operational concepts of the Navy's capabilities within an ESG to support a long range raid. It presents the assumptions made, key capabilities within the ESG that can be used in support of long range raids, and a brief discussion of the known limitations within an ESG. It also sets the stage for the chapters that will specifically address raid support from the concepts of Command and Control, Planning Considerations, Deep Operations and Close Battle Support, and Rear Area Operations. The result is an approach that fully supports the Rapid Response Planning Process (R2P2).

1.2 BACKGROUND

As the concepts of "Sea Power 21" and "Marine Corps Strategy 21" continue to evolve, the capability of an ESG's Navy element has increased, allowing it to contribute to the support of the long range raid in new ways.

More generally, the capabilities of our military forces are such that few potential adversaries want to enter into direct combat with the United States on the battlefield. To counter our overwhelming superiority on the conventional battlefield, enemies seek to engage the United States with asymmetric threats. Whether state-sponsored or as non-state actors, survivability will drive future adversaries to remain as covert as possible for as long as possible and avoid assembling a critical mass until they are ready to strike. This drives the requirement for responsiveness with speed and precision at range as indicated by operations in Afghanistan and Iraq in support of the "War on Terrorism." For many targets, cruise missiles and air strikes will not deliver the effect desired. Instead, the need for intelligence collection, documentation, capture of high value targets, or for confirmation that a particular threat, such as a weapon of mass destruction, has been eliminated will drive the requirement to commit troops to a raid. In short, when combat forces are required at the objective to ensure mission success, the long range raid provides the ability to get the required forces in and out quickly. While the ESG may not have originally been optimally organized, equipped, and trained to conduct raids at ranges from 200 to 500 NM, a long range raid from the ESG may be the most responsive option available to a theater commander to deal with certain time sensitive targets.

Successful expeditionary operations, including long range raids require maritime and air superiority; a favorable combat ratio at the point of attack; and the establishment, protection, and maintenance of lines of communication across uncertain or hostile territory to support the raid force. Based upon the commander's intent, shock, speed, surprise, violence, mass, firepower, and deception remain among the options available to successfully accomplish the mission.

1.3 TACTICAL MEMORANDUM OBJECTIVE AND ASSUMPTIONS

Focused upon the Navy systems and capabilities within the ESG, the objective of this TACMEMO, is to identify present (and near future) capabilities of the ESG and offer ideas regarding how those capabilities could be used to support a long range raid. Toward that end, this TACMEMO also examines command and control, logistics, assault support, close air support, naval surface fire support, search and rescue, aircraft and landing craft refueling, well deck and flight deck cycle times, and non-organic support that may be requested for long range raids.

The TACMEMO is developed based on the following assumptions:

1. It will be written at the MEU-ESG level, but can be applicable to other planners (e.g., Combatant Commander and component staffs).

2. Distance and fuel required are the key parameters of long range raid planning:
   a. For ranges of 200 to 500 NM, the raid will be principally limited to CH-53E and KC-130 aircraft for assault support and refueling until the MV-22 is fielded. If sufficient refueling assets are available, the AV-8B and AH-1W will be available to provide Close Air Support (CAS).
   b. For routine training and logistics flights, the Aviation Combat Element (ACE) assets are administratively restricted to fly no more than 50 miles as a section or 25 miles single ship over water without an alternate landing area (i.e., either a point ashore or a ship acting as a lily pad), but this limit may be waived for operational necessity.

3. A raid is a short duration event.

4. Current ACE assets and the MV-22 are considered in the long range raids, and the raid will be conducted in varying threat environments depending on mission criticality.

5. Although the TACMEMO is written with the MEU as the embarked landing force, it is applicable to any size Marine Air Ground Task Force (MAGTF), or Special Operations, Army, allied, and coalition forces that may be part or all of a raid force supported by the ESG.

1.4 CAPABILITIES OF NAVY SUPPORT TO LONG RANGE RAIDS

Appendix A provides a broad discussion of the details on the platforms and systems of the Navy assets assigned to an ESG. For a complete discussion of a ship's capabilities, planners should refer to the assigned asset's staff, the "Class Tactical Manual," or the individual Ship's Information Book.

In general, the addition of three guided missile surface ships and an attack submarine to the ESG provide a whole new range of Navy capabilities for supporting a long range raid. Chief among them are:

1. Four ships with at least a 10 knot sustained speed advantage over the assigned amphibious shipping, which may allow elements of the raid and supporting force to close the area much faster.

2. Three additional flight decks are available that can support CH-46E, UH-1N, and AH-1W flight operations and serve as lily pads for long range flight operations.

3. Organic MH-60S and SH-60B helicopters with:
   a. Overwater day/night and limited overland search and rescue (SAR) capabilities
   b. Improved overwater and overland navigation systems
   c. Additional logistics lift
   d. Weapons for force protection
   e. Limited assault support (troop lift) capability (11 troops).

4. Additional long range air search radars.

5. Standard missiles for air defense.

6. 5"/54 caliber gun mounts for Naval Surface Fires Support (NSFS), anti-air warfare, and anti-surface warfare.

7. Depending on the ship mix, some ships are equipped with a Ship Signals Exploitation Space (SSES) and related equipment for enhanced electronic support.

8. Tomahawk land attack missiles (TLAM).

9. Sonar and anti-submarine warfare weapons systems.

10. A limited clandestine insertion capability from the submarine.

11. A non-traditional profile for amphibious forces to support information operations (IO).

12. Additional communications, command, and control systems; including satellite and line of sight radios, voice, video and data systems that provide robust command and control of the ESG with the ships widely dispersed.

13. Additional capabilities to task and control non-organic assets in support of a long range raid.

14. Rigid Hull Inflatable Boats (RHIBs) with force protection, SAR, and insertion capabilities.

15. The ability to support various future systems that will expand the ability of the ESG to conduct long range raids including:
   a. MV-22 Osprey

b. AH-1Z and UH-1Y helicopters
c. The Expeditionary Fighting Vehicle (EFV)
d. F-35 Joint Strike Fighter (JSF)
e. Amphibious Assault Ship (Redesign) LHA(R)
f. Extended range guided munitions (ERGMs)
g. CH-53X helicopter.

The remaining chapters of this TACMEMO will look at these Navy capabilities in detail, discussing how they might support a long range raid.

1.5 LIMITATIONS OF NAVY SUPPORT TO LONG RANGE RAIDS

The most obvious limitations of Navy support to a long range raid stem from the compatibility of MEU assets with the newly added Navy ships, providing a practical limit to Navy support. With specific regard to the CH-53E, the only flight decks that can support CH-53E operations are the amphibious assault ship (LHA or LHD); the amphibious transport dock (LPD), which has two CH-53E spots, each rated with a 50,000 pound weight limit; and the dock landing ship (LSD), which can handle a single CH-53E at a time without a weight restriction. The flight deck of a cruiser or destroyer cannot support a CH-53E, and the cruisers, destroyers, frigates, and attack submarines were not originally designed for expeditionary operations. Additionally, "certified to operate" a particular helicopter for flight operations does not equal true interoperability. Therefore, berthing, fuel, ammunition, consumable logistics, ordnance compatibility, support equipment, servicing adapters, specialized tools, and training of personnel are all issues that must be addressed before any of the capabilities above will be truly useful in support of a long range raid. If a tactic, technique, or procedure in this TACMEMO is to be useful to the ESG, it must be trained to and rehearsed prior to execution.

1.6 COMPOSITE WARFARE COMMANDER

Like other strike groups, the ESG will be organized using the Composite Warfare Commander (CWC) concept. Currently the Pacific Fleet has a flag officer in command of the ESG, while the Atlantic Fleet continues to use the traditional PHIBRON/MEU command relationship with a Navy Captain and Marine Colonel serving as the respective commanders. Regardless of the CWC organization of the ESG, the multi-mission capabilities of the units within the ESG and the normal, competing, multiple tasking within a given theater require the ESG to execute a variety of roles and missions within a theater; occasionally as the supported commander and more often as the supporting commander. In addition to understanding the theater command and control organization, the ESG will probably find that it has to educate the Combatant Commander's staff with regard to the organization and capabilities of a particular ESG. This topic is addressed in more detail in Chapter 2.

1.7 COMPLEX BATTLESPACE

With its inherent mobility and flexibility and the expansion of expeditionary capabilities represented by Sea Power 21 and Marine Corps Strategy 21, ESGs often find themselves operating in a complex battlespace. Generally speaking, every nation in the world is assigned to the area of responsibility (AOR) of a specific Combatant Commander (COCOM). The COCOM (or a subordinate Joint Force Commander) will designate parts of the AOR as areas of operations (AOs) for assigned forces, such as ESGs, CSGs, and SAGs. Designation of AOs depends on the assigned force’s mission and area of influence, which is a geographic area wherein the force is directly capable of influencing operations by maneuver or weapons systems under the force’s command or control. Surrounding the area of influence will be an area of interest (AOI) that represents the area of concern to the force. This includes the area of influence, areas adjacent thereto, and extends into enemy territory to the objectives of current or planned operations. The AOI also includes areas occupied by enemy forces that could jeopardize the accomplishment of the mission. Therefore, the AO, area of influence, and AOI of the ESG will be dynamic. Additionally, the areas of influence and AOIs of other theater forces will frequently overlap those of the

ESG. While AOs will not overlap, the ESG may find its AO within the area of influence or AOI of one or more other theater forces and find one or more AOs of other theater forces are within their area of influence or AOI.

Further complicating the battlespace, a long range raid mission for the ESG will require an AO around the raid site for the raid force, which likely will not be contiguous with the AO of ESG shipping. In many cases, Special Operations, or other government agency assets may already be on the ground near the raid AO. To effectively support a long range raid, the planners within an ESG must understand the processes and procedures for requesting and controlling battlespace in its assigned theater. The Navy part of an ESG is well suited to support the MEU in this regard, and this topic is covered in more detail in Chapters 2 and 3.

1.8 DEEP OPERATIONS, CLOSE BATTLE, AND REAR AREA OPERATIONS

The current Joint concepts of deep operations, close battle, and rear area operations were adapted from Army doctrine for the AirLand battle. While the concepts were originally linked to distances between opposing forces and futurity of operations, the Joint battlespace of today is more fluid than that envisioned by the AirLand doctrine, and thus the concepts no longer have a specific correlating distance. As used today, they are defined by relationships among forces, sensors, weapons and the degree of control and freedom to operate they confer.
Deep operations take place beyond the AOs of friendly forces, but within the areas of influence. Close battle occurs when enemy forces are engaged within a friendly force AO and coordination of friendly support is required. Rear area operations facilitate support and protection of the joint force. Currently, MCWP 3-36, *Army Marine Corps Integration in Joint Operations* and MCWP 3-40.7 *Joint Force Land Component Commander Handbook* provide the latest and most complete joint doctrine regarding deep operations, close battle, and rear area operations.

Doctrine continues to develop in response to asymmetric threats and the lack of a well-defined front. Faced with the need to conduct presence, humanitarian assistance, and combat operations in close proximity, the concepts of deep operations, close battle, and rear area operations may evolve in time to shaping operations, decisive combat, and support/force protection, respectively.

Long range raids are a part of deep operations. They take place within the area of influence but beyond the AO of the ESG. If the raid target is within the area of influence of other friendly theater forces, then non-organic support may be available from these forces. Unless the raid target is beyond the AOI of every other theater force, some degree of coordination will be required with other theater forces.

Should the enemy choose to defend the raid site and the engagement requires coordination of supporting arms with the raid force commander to prevent fratricide, a close battle will develop. The MEU(SOC) commander may establish a fire support coordination line (FSCL) to facilitate expeditious attack of targets beyond the FSCL and provide control and coordination of attacks short of the FSCL in close proximity to the raid force. Alternatively, the MEU commander may employ the concept of "kill boxes," using a grid system to demarcate the battle space and then opening and closing various combinations of grid squares based upon the presence of known hostile forces and the absence of friendly forces. Whether an FSCL is used or the kill box methodology is employed, the Supporting Arms Coordination Center (SACC) needs to coordinate with the Joint Force Fires Center (JFFC), if established.

With the demise of the Soviet Union and the expansion of the over the horizon capabilities of our systems, the Navy has turned the oceans into an area in which we can maneuver and operate at will, relatively free from enemy interference. Using the concepts of Sea Basing and Sea Shield, the Navy, operating close inshore in the littorals where necessary, can stage and support deep operations against a threat almost anywhere in the world. Even in asymmetrical warfare, we have the ability to take the fight to the enemy. At the same time, operating in the littorals, the ESG can provide substantial force protection to itself and to friendly forces ashore within the ESG AO. The combined, and often simultaneous, support and force protection capabilities of the Navy are the very definition of rear area operations.

Although we discuss deep operations/close battle and rear area operations separately in later chapters, it should be remembered that multi-mission assets, such as a cruiser, might participate in any number of these simultaneously. For instance, a cruiser could simultaneously be engaged in electronic support (ES) to deep operations, NSFS to a close battle, and supporting SH-60B flight operations for maintaining the surface warfare common operational picture (COP) in support of rear area operations. On the other hand, a single mission, such as overland air defense in support of deep operations or a close battle may be so demanding in terms of ship location, equipment configuration, and watch station manning that the ship is unable to support additional tasking. Therefore, the TACMEMO tries to highlight the implications of tasking multi-mission assets to support deep operations, close battle, and rear area operations simultaneously.

1.9 APPROACH

While the specifics of each long range raid mission will be inherently different from the next, the planning processes and procedures for each will exhibit general similarities. Chapter 2 deals with Command and Control in support of a long range raid, while Chapter 3 discusses long range raid planning and intelligence considerations. Chapter 4 focuses on supporting the raid force downrange in deep operations, including when the enemy chooses to defend and a close battle develops. Chapter 5 covers rear area operations in support of the long range raid, and finally, Chapter 6 provides a test plan for evaluating this TACMEMO.

The goal of this TACMEMO is to provide planners with reasonable and realistic alternatives and a tool to aid planners in assessing the associated trade-offs for employing the Navy capabilities resident within the ESG in support of the long range raid. The TACMEMO identifies issues for consideration so that planners may make timely recommendations to the operational commander for providing optimum support to the raid.

CHAPTER 2

Command and Control

2.1 INTRODUCTION

This chapter provides Navy commanders and their subordinates within an Expeditionary Strike Group (ESG) with a variety of command and control (C2) considerations that must be understood and should be reviewed prior to or in conjunction with supporting a long range raid. The chapter broadly addresses the basic tenets of C2, including assignments, duties, and responsibilities; however, the details of many of these same tenets cannot be discussed as they will be dependent upon the content of the mission statement or operations order and the forces involved. Underpinning the success of a long range raid is a close working relationship between the Navy and Marine Corps commanders; founded on the ability of the commanders and their staffs to rapidly assess the situation, make decisions and communicate their intentions, and the interaction of the planners from each staff.

For the long range raid, as for any other Marine Expeditionary Unit (Special Operations Capable) (MEU(SOC)) mission, the MEU commander requires effective and reliable command and control supported by the Navy capabilities of the ESG and augmented, as available, by non-organic forces and agencies. Providing C2 support to the long range raid is a multi-step process; the steps are not necessarily sequential, often performed in parallel, and each step may not apply to every long range raid.

The Navy component of the ESG will aid in developing a plan to accomplish the mission and must express their ability to support the proposal submitted by the raid force commander. In completing their duties, the Navy will assist in establishing, maintaining, and defending lines of communication across potentially uncertain or hostile battlespace that extends from the ESG to the raid site and back. The tenets presented by Rear Admiral Alfred Thayer Mahan in "*The Influence of Sea Power Upon History*," 1890, that lines of communication are the routes by which information, services, goods, and people move from one place to another remain to this day. For the long range raid, they may include, but not be limited to, a satellite communication link from the raid force commander to the Landing Force Operations Center (LFOC), a low-level transit route (LLTR) for heliborne assault support and logistics, or a Tactical Digital Information Link (TADIL) to disseminate a common operational picture (COP). These lines of communication are easier to develop, use, and traverse as a result of the systems, sensors and capabilities inherent in the ESG, which represent a significant increase in the Navy support previously available in the Amphibious Ready Group (ARG). As presently configured, the notional ESG provides an enhanced naval capability to deliver and sustain effective maritime power projection and forward presence as well as additional layers of defense, fire support, and force protection.

Note

The ESG will typically consist of three amphibious ships (an amphibious assault ship (LHA or LHD), an amphibious transport dock (LPD), and a dock landing ship (LSD)), two AEGIS ships (guided missile cruisers (CGs) and/or guided missile destroyers (DDGs)), one destroyer (DD) or frigate (FFG), one attack submarine (SSN), a MEU(SOC), and appropriate staff manning.

Command relationships are frequently adapted to meet the needs of each new mission. In general, for the extreme cases, the raid could be in part or whole the main effort of a theater campaign, heavily supported and tightly controlled by the Joint Force Commander (JFC), or the raid could be separated by space and time from the main effort of a theater and the ESG given greater latitude and responsibility with limited or no non-organic support.

2.2 COMMAND RELATIONSHIPS AND RESPONSIBILITIES

The command relationships and responsibilities of the ESG are assigned by the establishing authority, and rooted in an understanding of those of higher headquarters. A discussion of the command and control provided by higher headquarters and a general overview of the C2 process is provided in Appendix C. Briefly, as stated in Chapter 1, every nation is assigned to a theater Combatant Commander (COCOM) who will oversee operations and coordinate with national and foreign governmental authorities and agencies. When undertaking military operations within the theater, the COCOM can assign a JFC or act as the JFC; or use another command structure (e.g., Service component) per Joint Publication (JP) 0-2, *Unified Action Armed Forces*. Recent operations have indicated that the JFC will generally organize the forces functionally, with a Joint Force Land Component Commander (JFLCC), a Joint Force Air Component Commander (JFACC), a Joint Force Maritime Component Commander (JFMCC), and a Joint Special Operations Task Force (JSOTF). Coalition forces not integrated into the joint forces may report to the JFC through their own national chain of command to a commander working for the JFC. The JFC is usually assisted by a number of boards, bureaus, centers and cells, including but not limited to, a Joint Intelligence Center (JIC) or Joint Analysis Center (JAC), a Joint Targeting Control Board (JTCB), a Joint Search and Rescue Coordination Center (JSRCC), a Joint Information Bureau (JIB) for public affairs coordination, a Joint Force Commander's Agent (JFCA) for logistics, and a Joint Visitors Control Bureau (JVCB). Within this organization, the ESG is generally assigned to the JFMCC. A notional theater organization is depicted in Figure 2-1.

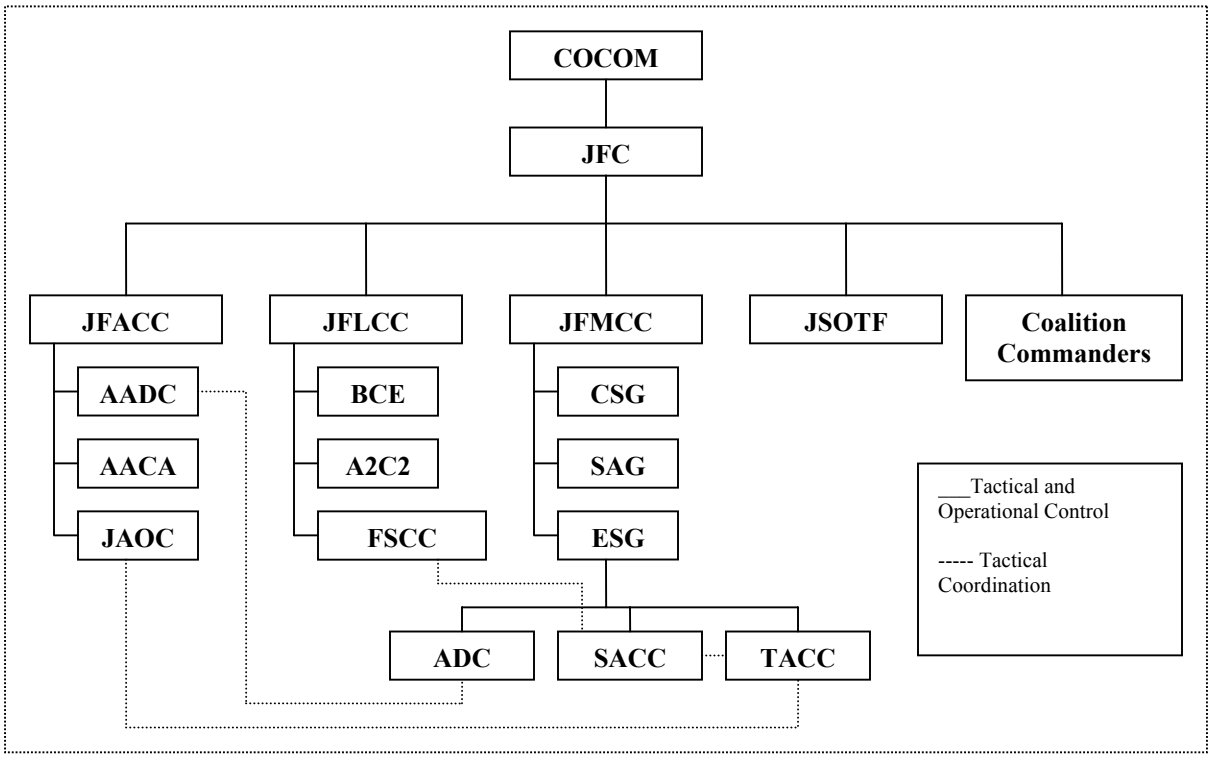

Figure 2-1. Notional Theater Command and Control Organization

To effectively obtain non-organic support for a long range raid, the ESG must know the commanders and processes involved in theater operations. While doctrine provides a general framework, each theater will have its own unique requirements and processes which may need to be adopted in response to mission specifics. The following discussion and the questions in Appendix C are designed to assist the ESG planner in identifying the processes and procedures specific to the long range raid being supported.

2.2.1 Expeditionary Strike Group

As noted in Chapter 1, the ESG concept remains in development with two distinct command proof of concept models under review (i.e., a West Coast and an East Coast model). A common thread between the two models is that Navy assets of an ESG are organized within a Composite Warfare Commander (CWC) structure. Likewise, the coequal amphibious planning relationship between the PHIBRON and MEU remains in effect with both models. However, the role of the PHIBRON commander represents one of the main differences between the models. In the West Coast model, the PHIBRON is a principal warfare commander (PWC) in the CWC structure, while in the East Coast model the PHIBRON is the CWC. In the East Coast model the CWC is augmented with appropriate subject matter experts.

In either model, the CWC is designated authority to develop and promulgate the appropriate standing general operations order (OPGEN), which will include the CWC task organization and assignments for the Navy portions of the ESG as discussed in NWP 3-56 (Rev. A), *Composite Warfare Commander's Manual*. Due to the evolving nature of the ESG concept, the CWC structures often vary from ESG to ESG, so the OPGEN should be consulted for appropriate command relationships. Some typical differences between traditional Carrier Strike Group (CSG) CWC structures and ESG CWC structures include the use of separate a Antisubmarine Warfare Commander (ASWC) and Surface Warfare Commander (SUWC) vice a Sea Combat Commander (SCC) and a greater use of ship commanding officers (COs) as PWCs (beyond the typical use of the cruiser CO as Air Defense Commander—ADC—with CSGs). While the forced decentralization of the CWC structure due to COs being PWCs is in line with CWC doctrine, it also brings a greater reliance on communications and Liaison Naval Officers (LNOs) during planning and execution. The roles and responsibilities of the warfare commanders and resource coordinators are highlighted in the ensuing two sections.

2.2.1.1 ESG Warfare Commander Responsibilities

Within the notional six hour rapid response planning process (R2P2), amphibious ships in the ESG can move over 120 NM, while the other ships can readily maneuver 180 NMs or more. However, to take advantage of this flexibility and mobility, the CWC must remain informed of the material status of the ships and embarked units, direct that sensors be continuously exploited in order to achieve the COP, and solicit recommendations from the warfare commanders in order to make the early decisions required upon receipt of the mission to optimally task, configure, and position the Navy elements of the ESG to support the long range raid. Responsibilities and considerations, by warfare commanders, would include:

1. Air Defense Commander (ADC) – Assess the threat axis and station ships and aviations assets to counter potential inbound aircraft or missiles, working with SCC (or ASWC and SUWC); review missile engagement zones or joint engagement zones; and determine return to force procedures.

2. Sea Combat Commander (SCC) – Provide current ship positions and projected positions for raid launch and recovery, and coordinate with the ADC for optimizing air defense capabilites and the screen commader (SC) for sensor coverage (requires a combined effort of ASWC and SUWC, if used in place of SCC).

3. Strike Warfare Commander (STWC) – Review requirements for Tomahawk land attack missile (TLAM) and NSFS firing positions; initiate requests for TLAM missions; review targeting and airspace coordination requirements.

4. Information Warfare Commander (IWC) – Determine support from theater and national intelligence assets; recommend stationing ships with intelligence collection capability to optimize the effectiveness of the system.

5. Mine Warfare Commander (MIWC) – Determine mine threats and organic and non-organic support that may be required to assist in conducting forward operations or a surfaceborne landing, if required.

6. Maritime Interdiction Operations/Leadership Interdiction Operations (MIO/LIO) Commander – Ascertain information on shipping or leadership targets that may be of interest during the conduct of the operation; emphasizing potential interference such targets could represent.

7. Screen Commander (SC) – Ascertain information regarding air, surface, and submarine threats; determine stationing requirements for protecting high value units and exploiting sensors, acting to avoid mutual interference or waterspace management issues.

Note

Postioning and tasking the SSN may involve coordination with the theater and/or ESG Submarine Operations Controlling Authority (SOCA) to adjust waterspace.

8. Logistics Commander – Determine availability of non-organic ships to provide replenishment support to include providing additional fuel and munitions as well as possible divert landing spots or aircraft available to support lift requirements.

9. Advanced Force Commander – Determine force disposition; and berthing, communications, munition storage, and landing craft and/or aviation support requirements.

2.2.1.2 ESG Resource Coordinator Responsibilities

Many missions are planned within the notional six hours of the standard MEU(SOC) mission planning guide. Thus, resource coordinators must be prepared to rapidly respond with the necessary equipment and personnel to support the operation. Additionally, they must be prepared to affect the necessary coordination with outside commands and agencies to enable the raid force to complete its assigned mission. Duties of the resource coordinators would include:

1. Air Resource Element Coordinator (AREC) – The AREC is the resource manager, coordinator, and air advisor to the CWC who coalesces fixed-wing air requirements and manages and coordinates the distribution of aircraft assets; apprising the CWC and other warfare commanders and coordinators of ESG air operations.

2. Helicopter Element Coordinator (HEC) – When two or more ships other than the LHA or LHD are equipped with helicopters, a central scheduling authority to control flight operations from these ships is useful to ensure the multi-threat demands are coordinated to meet the needs of the SCC/ASWC and SUWC; a duty generally assigned by the CWC to the embarked TACRON.

3. Cryptologic Resource Coordinator (CRC) – In support of the IWC, provide recommendations for specific cryptologic direct support operations, signal security, special intelligence and developing a coordinated cryptologic plan.

4. Force-Over-the-horizon Track Coordinator (FOTC) – Maintain common operational picture (COP) and coordinate Link 11/16.

5. Launch Area Coordinator (LAC) – Lead the execution of TLAM strike operations and coordinate on-scene requirements; has the authority to control launch platform maneuvers and stationing in TLAM launch areas.

6. Search and Rescue (SAR) Coordinator – Coordinates the efforts of a search and rescue evolution.

7. Intelligence Coordinator – Coordinates the intelligence products.

8. Sea Air Land (SEAL) Team Leader – provides recommendations for the team's employment in support of the raid.

2.2.2 Augmentees and Liaisons

In addition to the support the Navy component within the ESG can provide to coordinating the C2 requirements internal to the operation, the Navy can likewise assist in providing support to higher headquarters; specifically with augmentees and liaison officers. As alluded to in paragraph 2.1, an interlacing network of C2 support will be necessary to facilitate the operation; for, like most operations, the long range raid is a complex operation and one for which a number of questions and concerns will arise. The issues may span the gambit of questions that could come about and range from technical capabilities and requirements to the intricacies of the operation and expeditionary warfare peculiarities. Similarly, manning shortfalls may create scenarios where the ESG may be tasked to augment the JFC to fill these positions. Key to remember is that the personnel who fulfill the duties as augmentees and/or liaison officers must have the full trust and confidence of the commanders they represent and be empowered to speak for them to the JFC.

While tasking personnel to man requirements outside the ESG will likely create shortfalls to the staffs and ships, the benefits gained by having an on-scene representative with the JFC cannot be overlooked. For example, if additional air support or targeting requirements arise, the presence of a person to interact directly and immediately with the JFACC is certain to improve the likelihood of receiving the required support. Accordingly, the ESG should look to fill the positions of the augmentees and/or liaison officer with senior subject matter experts (i.e., senior enlisted personnel or officers, and officers selected for but not yet assigned to command). The ESG should also consider requesting that qualified reserve personnel receive orders to come into the theater and support the ESG.

Figure 2-2 depicts the commanders and coordinators from the ESG CWC organization, and the commanders and coordinators from the JFC with whom they will frequently interact. While it is unlikely that the ESG could provide a liaison for each, a single liaison with sufficient experience and expertise could serve in multiple roles.

COMMANDERS	JFC COUNTERPART
CWC	JFC/JFMCC
ADC	JFACC
SCC	JFMCC
STWC	JFACC
IWC	JFC
MIWC	JFMCC
MIO/LIO Commander	JFMCC
Logistics	JFC
COORDINATORS	**JFC COUNTERPART**
AREC	JFACC
HEC	JFACC
CRC	JIC/JAC
FOTC	JFMCC
SAR Coordinator	JRSRC
Intelligence Coordinator	JIC/JAC

Figure 2-2. Composite Warfare Commander and Joint Force Commander Counterparts

2.3 BATTLESPACE CONSIDERATIONS

Expeditionary warfare is unique for its simultaneous operations in a maritime, air and land environment and the requirement to deal with the littoral interface linking these environments. The following paragraphs will provide insight into some of the C2 considerations that emerge from such operations. Critical to any successful operation is the need for early and frequent dialogue between all participating commands and an understanding of what the duties and responsibilities of those outside one's immediate organization entail.

2.3.1 Maritime Battlespace Coordination

Command and control in support of the long range raid overwater is a function of force disposition, and readying assigned forces to interdict any potential threat. With time, the ESG can reposition units to provide sensors, communications, logistics, and control of the entire overwater portion of the raid route; in essence, expand the C2 network and aid the MEU(SOC) commander in communicating with and supporting the raid force. However, the constraints associated with most long range raid missions dictate that planners rapidly determine where their assets are now, and where could they be within the time available to best support the raid. Thus, maritime battlespace management becomes a matter of optimizing the force disposition to support the mission by rapidly taking action to expand the common operational and tactical picture. Directing the launch of SH-60B aircraft to validate the COP is likely to be the first step taken in this regard, but such action may conflict with other intentions for supporting the raid with the same helicopters. Therefore, planners should look to expand their battlespace situational awareness though information provided in the link and from non-organic assets, including tapping into the resources of a CSG, SAG, other Navy ships, or coalition ships that could be drawn into the operation. Incorporation of their sensors, and communications and weapons systems may substantially improve C2 and strike warfare in the maritime battlespace.

For the Navy planner, working with MEU(SOC) counterparts, the key questions are what capabilities do I need to get downrange and when? These apparently simple questions mask the detail required to complete the assignment. In the end, the solutions will likely be found in standard operating procedures and pre-planned responses that were developed and rehearsed during pre-deployment training. The nature of the operations should not be left to chance nor attempted as an initial effort without serious consideration and justification; planning to permit a rehearsal is advised. Additional discussion of planning considerations, potential missions and the units is provided in Chapters 3 through 5.

2.3.1.1 Waterspace Management

The addition of submarines as part of an ESG requires ESG long range raid planners to think three-dimensionally in regards to battlespace management. Not only will surface and airspace management be necessary but the need will also exist for subsurface coordination, necessitating a plan for deconfliction through waterspace management. Accordingly, it is the waterspace management system that assures the control of antisubmarine weapons to prevent inadvertent engagement of and by friendly submarines: it is a system of agreed procedures to permit the coordination of assets, with the aim of preventing mutual interference between submarines or between submarines and other assets. Waterspace management is assured by allocating surface and underwater spaces to specified users. Waterspace management is imperative if submarines are utilized in support of a long range raid.

2.3.1.2 Operational Task Amphibious

The additional ships and submarine of the ESG, coupled with their speed advantage over the amphibious ships, increase the complexity and detail required in the Operational Task Amphibious (OPTASK AMPHIB). In drafting the OPTASK AMPHIB, planners should look to use the ships as lily pads (i.e., way points/stop over points) to extend the range of ESG flight operations, support advance force operations, and provide covert insertion of reconnaissance and surveillance or hydrographic survey teams. Within the six hour R2P2 planning window for MEU(SOC) missions, the ESG can now extend its overwater presence by up to 180 miles or more.

Operating as a distributed force, the ESG extends its command, control, communications, and surveillance capabilities as well.

2.3.2 Land Battlespace Coordination

Command and control in support of the long range raid overland is a function of range and terrain; and will largely be the responsibility of the raid force and its parent command. As the range inland increases, the capabilities of the ESG to support the long range raid generally decrease. Elevated terrain between the ESG and the raid site further reduces the ranges of sensors and weapons systems within the ESG to support the long range raid. To optimize Navy contributions to the overland C2, planners should look to exploit terrain features; e.g., a valley that extends inland from the sea that could provide a pathway for looking down onto the target or the shadow of a mountain or bluff to hide from a land radar site, and station ships accordingly.

Traditionally, the MEU(SOC) uses the UH-1N for airborne command and control and communications relay. For the long range raid, the UH-1N may have insufficient range to perform this traditional role. To meet this challenge, Navy planners may wish to propose that the SH-60B or MH-60S, with its longer range, be used to support the mission while overland. While not providing the full C2 capability of the UH-1N, it can provide an organic communications relay capability for the raid force or it could be proposed as the alternate communications or C2 platform for the mission.

The Supporting Arms Coordination Center (SACC) coordinates fires, including TLAM and NSFS in support of the raid. SACC is responsible for developing and disseminating fire support coordination measures for the long range raid. If other friendly land forces are within the area of influence of the ESG, SACC will coordinate with the theater fire support coordination center (FSCC) or Joint Force Fires Center (JFFC) for deconfliction. If the raid area of operations (AO) is within the area of influence of another land force, and fire support is available from that force, such as the Army Tactical Advanced Conventional Munitions System (ATACMS), SACC will coordinate such support with the appropriate fire support element (FSE) through the FSCC/JFFC.

To prevent fratricide, it is critical that SACC request no fire areas (NFAs) for the location of all ESG forces on the ground and keep them updated and ensure that airspace control measures (ACMs) requested by the Tactical Air Control Center (TACC) and instituted by the Area Airspace Coordination Authority (AACA) are reflected in the airspace coordination areas plotted and maintained by the FSCC/JFFC. Alternatively, the “kill box” methodology may be used, and the SACC will have to closely coordinate the opening/closing of kill boxes among the MEU raid force commander and the other controlling authorities and coordination centers.

2.3.3 Air Battlespace Coordination

While the ability to conduct the long range raid may largely depend on the availability and readiness of the ESG’s aviation assets, the ability of planners to coordinate available assets, to determine the extent of non-organic support required, and to effectively incorporate that support into the operation could have an equally significant impact on the operation as well. In addition to exercising effective airspace C2 in their area, planners may interact with the various joint commands that also deal with airspace coordination and control at the higher levels, an area for which the TACC is well suited.

In the event that ESG operations are conducted at some distance from main theater operations, the TACC should also be prepared to accept duties as a regional airspace control authority (RACA) and be ready to publish their own Air Tasking Order (ATO) and Airspace Control Order (ACO) with an information copy to the JFC and JFACC. When in proximity to other theater operations, the TACC has the primary responsibility for coordination with the Joint Air Operations Center (JAOC) and must be prepared to submit an Airspace Control Measures Request (ACMREQ) to the AACA to define and manage the airspace required to conduct a long range raid. In addition, the TACC may be required to submit an Allocation and Request Message (ALLOREQ) to the JFACC specifiying ESG sorties to be flown and requesting non-organic sorties to support ESG operations. When

approved these sorties will be published in the ATO. In addition to normal communications channels, the TACC has access to the Theater Battle Management Core System (TBMCS) to help prepare the ALLOREQ, ACMREQ, and ATO inputs with their associated special instructions (SPINS), for release by the ESG to the JFACC.

When working with higher headquarters, it must be remembered that JP 0-2 confirms operational control of Marine air assets by the MEU(SOC) commander for an ESG-sized operation, which is often referred to as Marine Air Ground Task Force (MAGTF) Integrity. The practical implication of this is that the MEU commander has the discretion to offer some of his unused available sorties to the JFACC or to hold them in reserve for potential MEU tasking.

In operations where Army helicopters are utilized, Navy air controllers from the ESG must be prepared to interact with Army air control agencies that would be organic to Army maneuver units with large numbers of helicopters. The Army Airspace Command and Control (A2C2) elements located at Corps and Division command posts work with their associated Fire Support Elements (FSEs) to deconflict air and fire support in real time, similar to TACC and SACC for the ESG. If the long range raid is in the vicinity of other land forces, SACC should coordinate with the FSCC to exchange fire support, air space control, and communications plans among the TACC, SACC, A2C2 and FSEs to permit real-time coordination.

2.3.3.1 Air Defense Coordination

As part of the ADC's responsibility to provide the ESG with an air defense plan, the ADC may be required to coordinate with non-organic forces. One advantage is that the ADC is equipped and trained to function as a regional air defense commander (RADC) or sector air defense coordinator (SADC) in the theater air defense architecture, which may automatically link the ADC to the necessary non-organic forces or the processes to obtain those forces. Depending on the air threat and the tradeoffs between optimizing internal ESG air defense to cover both overwater and overland areas, the ADC may need to coordinate for airborne early warning (AEW) and/or combat air patrol (CAP) assets. The need for AEW and CAP will likely be greater overland rather than overwater, so raids with a significant air threat and a sizeable overland piece (or an overland section with radar-limiting terrain) increase the need for these outside services to reduce risk. Additionally, if the ADC sets up Missile Engagement Zones (MEZs) or Joint Engagement Zones (JEZs) as part of the ESG air defense plan or acting as the RADC/SADC, the ADC must ensure that all aircraft airborne during the raid are aware the MEZ/JEZ locations in conjunction with flight plans and Return to Force (RTF) and Minimum Risk Route (MRR) procedures. As a safeguard against friendly fire incidents, MEZ and JEZ locations as well as RTF/MRR procedures should be part of the confirmation brief.

2.3.3.2 ESG Target Board

Within the ESG a combined Navy and Marine Corps target board must be established and chaired by the deputies or chiefs of staff of the senior Navy and Marine Corps commanders in the ESG. This board is supported by key members of the SACC, TACC, IWC shop, and JIC. These members allow the target board to pull together all of the coordination that has been discussed above and focus it on selecting the targets necessary to accomplish the mission. When operating in an established theater, the target board produces target lists and target nomination (TGT NOM) messages as required to provide input to the theater Joint Integrated Prioritized Target List (JIPTL) and No Hit list, which are essential documents for raid planning. The JIPTL and No Hit list constitute a starting point from which raid planners must look for and nominate any additional targets needed to support the raid.

It should be remembered that while the theater target list may contain hundreds or thousands of targets, only the top 50 to 100 targets are actively being worked with perhaps the top dozen to be struck in the next 24 hours. Since only targets on the list receive effort to prioritize them, collect intelligence on them, or plan a mission against them, the target board must provide a daily target list to the Joint Targeting Control Board (JTCB) that prioritizes the top ten or 20 missions. The target list should also include a list of targets the ESG is prepared to strike with its own assets: TLAM, NSFS, AV-8, or AH-1W.

A target may be of interest to the ESG for long range raid planning only in response to the enemy's course of action. For example, if a hostile unit could move toward the raid site, either the hostile unit or perhaps a bridge between the raid site and the hostile unit could be a target. In the event that the hostile unit becomes the target, the area should have been overlaid by a series of kill boxes (according to JFACC doctrine, which may already be done if working in a developed theater) with appropriate instructions on who controls the opening and closing of the kill boxes. If the bridge (in this example) becomes the target, the target board would need to ensure that the target has sufficient priority on the JIPTL. In either case, the target needs to be covered either by an ESG-generated sortie or, as discussed in section 2.2.3, a non-organic sortie requested by TACC. Ultimately, the success of obtaining non-organic support depends on JIPTL target priority.

Lastly, special attention should be paid to TLAM targets and high value targets on the No Hit list being exploited for intelligence purposes. The existing TLAM targets should be identified along with the availability of planned missions onboard the shooters. In the case of identifying other targets suitable for TLAM or for which no mission has been planned, TLAM mission planning should be requested. If higher headquarters is collecting intelligence from targets on the No Hit List, the JIC should request that the ESG receives the intelligence in a timely manner, since the data may be pertinent to the raid mission.

2.4 RULES OF ENGAGEMENT

The ESG Judge Advocate General (JAG) officer, as supported by other JAG officers within the ESG and personnel assigned to the intelligence collection team, must carefully parse the mission and seek the appropriate authority within the Chairman of the Joint Chiefs of Staff Standing Rules of Engagement (ROE), (i.e., Chairman of the Joint Chiefs of Staff Instruction 3221.01 of 1 October 1994). This ROE must also be augmented by the combatant commander to ensure necessary safeguards are in place to assure mission success. In view of the wide range of options that could be sought and the diverse nature of the long range raid, further comment on this matter is deferred to NWP 1-14M/Marine Corps Warfighting Publication (MCWP) 5-2.1/U. S. Coast Guard Commandant Publication (COMDTPUB) P5800.7, *The Commander's Handbook on the Law of Naval Operations* and the details of the operation.

2.5 INFORMATION MANAGEMENT

Central to the ability to successfully complete a long range mission will be the need to control the flow of information within and going outside the ESG. The successful operations are those that have come about as a result of developing a well-organized team to receive, analyze and distribute the information needed to plan, direct or report on the operation.

As a general statement, there are typically insufficient line of sight and satellite communications radios on ESG platforms to support all "doctrinally required" dedicated circuits. However, for a specific mission, this may not always be true. The presence or absence of all required circuits will be but one more issue that needs to be examined when developing the mission's "Go/No Go" matrix. To meet the challenge of a lack of sufficient equipment, planners have sought innovative solutions to their task at hand. Modern joint and coalition C2 have augmented dedicated, controlled, radio nets, and record traffic systems with Internet Protocol (IP) based non-record systems using the web, email, and chat (with appropriate means of acknowledgement and understanding); and commercial satellite telephone capabilities such as Iridium and the International Marine Satellite Telephone (INMARSAT) system.

The speed and responsiveness of recent military operations in Afghanistan and Iraq have been due in no small part to decision making frequently occurring at the lowest possible level in every organization, and communicated by means of non-record traffic. Information flow across the theater, and at the ESG level, is increasingly executed in near real-time via chat or email and not record message traffic. These non-record IP based systems

have been essential to reducing the response time of on-call CAS, CAP and strike packages for time sensitive targets (TSTs) towards the desired standard of "single digit minutes."

To ensure the commander's visibility into the decision making process and provide an adequate record for post-action analysis, debrief, and intelligence collection, the ESG should establish an Information Management Standard Operating Procedure (SOP). This SOP should provide for timely notification of the LFOC Watch Officer and ESG Battle Watch Officer of information passed and decisions made so that commanders are kept informed and appropriate log entries made. To support a specific mission such as the long range raid, it should include a proactive information push plan to keep the chain of command informed.

CHAPTER 3

Planning Considerations

3.1 INTRODUCTION

This chapter focuses upon three sets of planning considerations that will shape and impact Navy support to long range raids: platforms, functional areas and documents supporting the final plan. First, the platforms section looks at optimizing the location and tasking of platforms to make maximum the use of their capabilities. Second, the impact of two functional areas is detailed: intelligence and Information Operations (IO). Note that while the additional functional area of communications is not addresses specifically in this chapter, it is considered throughout the document. At the end of the chapter, Navy support for development of Go/No Go criteria, an Execution Checklist, and a Confirmation Brief, all important parts of the final plan, is covered.

3.2 PLATFORM CONSIDERATIONS

Because the Marine Expeditionary Unit (MEU) typically starts with the objective of getting the raid force to the raid site at a predetermined time and then works backwards to make plans to support that object, planning for Navy support to the long range raid will likely benefit from a similar approach. With this idea in mind, this section considers the positioning and capabilities of the various Navy platforms that are part of an Expeditionary Strike Group (ESG). Lastly, a section that considers future platform capabilities is included. Further discussion of future capabilities can be found in Appendix A.

3.2.1 Surface Ship Considerations

Navy planners should be prepared to offer the services of the ships within the ESG to perform an array of tasks. When properly stationed, they can fulfill missions ranging from aviation support to platforms from which intelligence and a clearer understanding of the common operational picture (COP) can be gained. Similarly, these ships can contribute to the execution of the mission by accomplishing specific tasks such as serving as the platform from which the raid force is launched; such duties not always having to be performed by amphibious ships, but also from the cruisers and/or destroyers, frigate, and submarine assigned to the ESG. Likewise, the ability of ships to maneuver to positions near the coastline and loiter, without creating high demands for re-supply for fuel or other items, can make them attractive options for pre-staging quick response packages. Other duties that can be performed by the ships of the ESG include providing naval surface fire support and air cover from installed missiles systems as well as direct strike with Tomahawk land attack missiles (TLAM).

3.2.1.1 Aviation Support

The number of aviation capable ships within the ESG allows for an expansion of the range of flight operations by using their flight decks to support refueling and rearming the aircraft as “lily pads.” Key to the use of these ships in this capacity is taking rapid action to dispatch them to maneuver to such locations that will benefit the operation.

From a practical point of view, the AV-8B is restricted to operations from the amphibious assault ship (LHA/LHD), airstrips ashore, and Forward Arming and Refueling Points (FARPs). The only other ship that could potentially support it, the amphibious transport dock (LPD), is limited to single spot, day, visual meteorological conditions (VMC), with vertical takeoffs. Except in circumstances where the ESG had been engaged in split-ESG operations where the LPD was operating in close proximity to the raid site, the range and payload penalties thus imposed make AV-8B flight operations from the LPD non-tactical and unable to support a long range raid. Still,

it cannot be discounted as it could offer some limited potential during the return transit when the ordnance has been expended or for an emergency landing.

The CH-53E can operate from the LHA/LHD, LPD, and dock landing ship (LSD). The LPD can support two spot operations; however the CH-53E is limited to 50,000 pounds gross weight. For a CH-53E with 32 combat loaded troops, this means a maximum fuel load of approximately 7,100 pounds versus a normal fuel load of approximately 15,500 pounds, effectively reducing the range and endurance of CH-53E flight operations from the LPD by half. The LSD can support single spot CH-53E operations at maximum gross weight. To support a section of CH-53E for lily pad operations would require approximately 40 minutes to serially recover, refuel, and launch each aircraft. This would impose approximately a 15-percent reduction in range for the section in their follow-on flight to the raid site. Raid planners should note that the LPD and LSD have no speed advantage over the LHA/LHD. If amphibious ships must be repositioned to support the long range raid, and there are no other tactical considerations involved, it is just as timely, and usually more tactically effective to reposition the LHA/LHD.

For the mission of a long range raid, the LPD, the LSD, cruiser (CG), guided missile destroyer (DDG), destroyer (DD), and guided missile frigate (FFG) can support the SH-60B and AH-1W flight operations. The LPD can support four spot AH-1W flight operations; and the LSD, DDG, DD and FFG can support dual spot operations while the CG is limited to single spot operations. For the SH-60B and MH-60S, the LPD can support dual spot flight operations, while the other ships are limited to single spot flight operations. The CG, DDG, DD, and FFG generally have a 10 knot speed advantage over the amphibious ships. Thus, the ability of a DDG, DD or FFG to embark two AH-1W helicopters and open the force toward the raid target may be an important factor for raid planning, provided the host ship has embarked, supported, and trained with the AH-1W in the past.

3.2.1.2 Advance Force Operations Support

As part of Advance Force Operations, the MEU commander will insert one or more reconnaissance and surveillance (R&S) teams to continuously observe the raid site. Other requirements may include hydrographic surveys to support surface logistic lifts to a coastal intermediate support base (ISB) or insertion of the Forward Command Element to coordinate with a friendly government. While the CG, DDG, FFG, and nuclear attack submarine (SSN) assigned to the ESG are not specifically configured to support advance force operations to the same extent as the LPD; they do possess a significant speed advantage over amphibious ships and are capable of transporting small-sized elements of advance forces. Detached and sent ahead, they also present a different profile than traditional amphibious shipping and provide increased options for deception planning. Covert insertion of advance force elements by the SSN is also a possibility. Others include using the CG, DDG, DD, or FFG to deceptively insert advance forces as part of a port visit, brief stop for fuel, or routine logistics transfer using helicopters. The advance forces could look like anything from a community relations project, to a tour group, to a group of personnel transferring out of theater. Finally, the sensors and systems of the CG, DDG, DD, FFG, and SSN allow for rapid development of the surface, air, and subsurface COP in the area of the raid and identifying the "normal" activity patterns of the threat, while providing increased force protection capabilities over a single LPD performing advance force operations.

MEU personnel will perform the majority of advance force duties. However, potential contributions from the ESG should not be overlooked. The Sea Air Land (SEAL) platoon may provide an R&S team. Personnel assigned to ships operating in the immediate vicinity or close proximity of the operation could also provide critical reporting. Within the ESG may be personnel who have lived in or near the area where the operation will occur, or are fluent in a particular language or dialect for the region where the operation is to be conducted. Likewise, the ability to fit into the environment by one who looks indigenous to the area can sometimes be overlooked. Still any such action should not be undertaken without due regard for the potential risks and the lack of training shipboard personnel may have for completing intelligence collection duties.

3.2.1.3 TLAM Support

The TLAMs carried by the CG, DDG, DD, and SSN have sufficient range to support the long range raid if suitable TLAM targets have been identified and missions planned. Unlike close air support (CAS) and artillery, TLAM is not a quick reaction weapon and TLAM strikes must be coordinated well in advance. Additionally, the location of the launch basket for the TLAM firing ship may prevent it from being in position to provide any other support to the long range raid. If the Rules of Engagement (ROE) and level of hostilities allow for it, the range, destructive power, and psychological impact of TLAM may make it useful for a diversionary strike away from the raid.

TLAM planning involves coordination with the Joint Force Commander (JFC) and Joint Force Air Component Commander (JFACC). In an evolution where planning can go beyond six hours, targets are generally selected by higher authorities. If a JFACC is designated, TLAM missions in support of the long range raid will be either pre-planned, scheduled or pre-planned, on-call missions on the Air Tasking Order (ATO); with the type of TLAM and target identified and the appropriate Minimum Risk Route (MRR) to cover the route of flight in the Airspace Coordination Order (ACO). If there is no JFACC, the INDIGO message (i.e., the TLAM tasking message) contains the TLAM type and its target. TLAM can be used as a stand-alone weapon or with manned aircraft as part of a strike package. If used with strike aircraft, close coordination between the strike leader and the TLAM strike coordinator is essential. For a further discussion of the coordination requirements for TLAM operations refer to theater commander guidance.

3.2.1.4 Naval Surface Fire Support

For those long range raid targets within 15 NM of the coast, the Mk 45 5"/54 caliber lightweight gun mounts of the CG, DDG, DD, and FFG can provide naval surface fire support (NSFS) to the raid force; either directly or in conjunction with deception or diversionary operations. In addition, the speed advantage of these ships over the amphibious ships allows for these vessels to be sprinted ahead and thereby be in position to enable the mission to commence sooner.

3.2.2 Aviation Considerations

Since a long range raid will rely heavily, if not exclusively on aviation for troop lift, associated support, and implied missions such as tactical recovery of personnel and equipment (TRAP), aviation becomes a primary planning consideration. As shown by Figure 3-1, responding to a task with MEU resources at ranges from 200 to 500 NMs generally limits choices to the Marine's CH-53E, AV-8B, and AH-1W, with appropriate refueling support. Given their longer legs, the MEU commander may wish to consider incorporating Navy SH-60B and MH-60S aircraft into the raid, while augmenting the capabilities of the MEU aircraft and providing refueling and rearming options are among the more critical requirements of long range raid that the Navy can support.

3.2.2.1 Navy ESG Aircraft

The typically assigned Navy air assets for ESG include the SH-60B and MH-60S helicopters. Depending upon the mix of ships with an embarked SH-60B assigned to the ESG, planners should anticipate having three or four SH-60B helicopters assigned to either the CG, FFG or DDG and two MH-60S helicopters assigned to the search and rescue (SAR) detachment aboard the LHA/LHD. SAR support for ESG flight operations at night will fully task at least one of the MH-60S, leaving the rest available to support the long range raid.

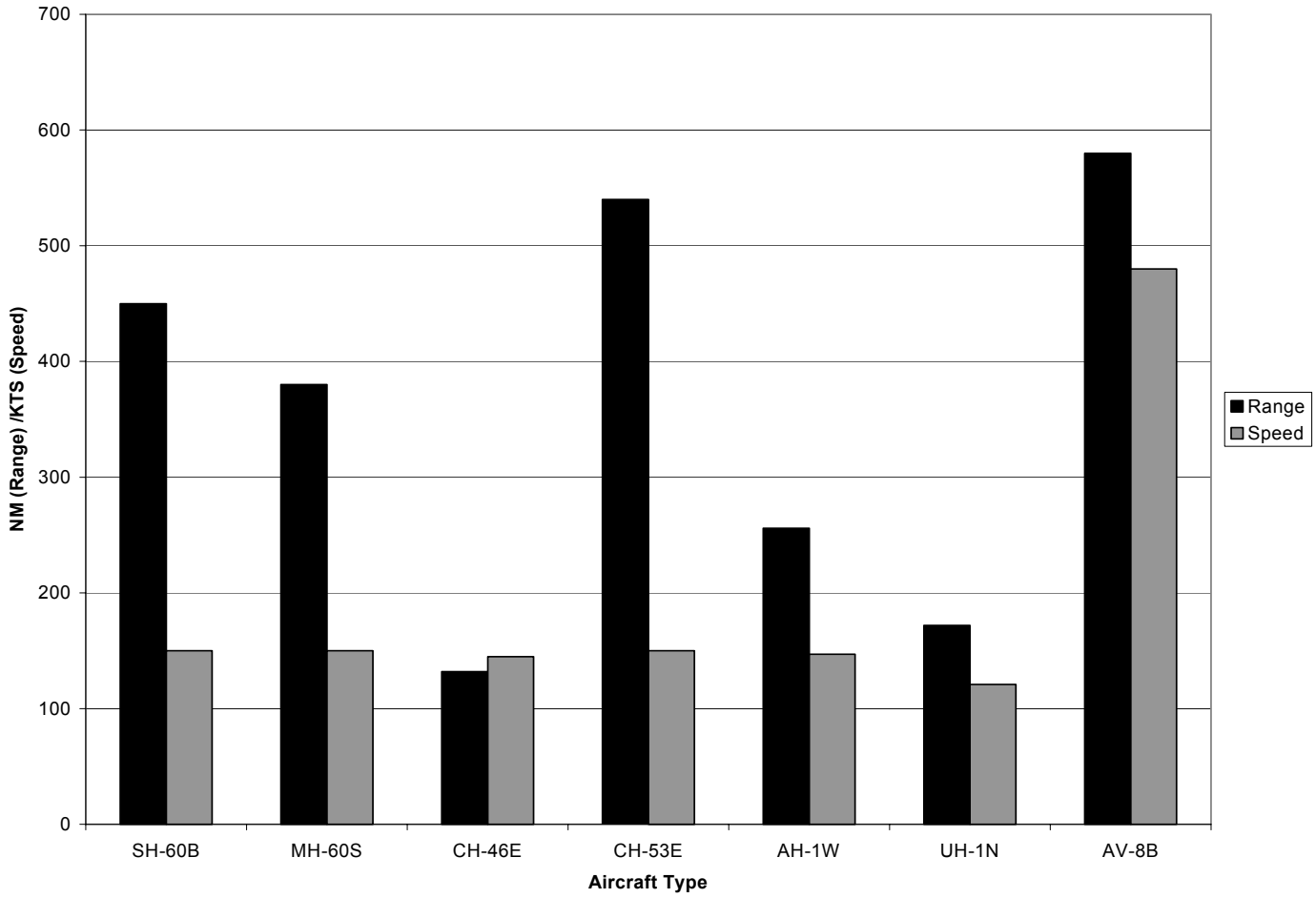

Figure 3-1. Expeditionary Strike Group Aircraft Ranges and Speeds

The SH-60B and MH-60S provide additional capabilities for long range raid support to the ESG not present in an Amphibious Ready Group (ARG). While lacking some of the speed and range of the CH-53E, they have the capability for in-flight refueling and helicopter in-flight refueling (HIFR) to extend their range. With an integrated Global Positioning System (GPS) navigation system, Forward Looking Infra-Red (FLIR), and automatic hover capability, they can be used for navigation lead of heliborne assault overwater or overland. The SH-60B and MH-60S can also provide communications relay, overwater and limited overland SAR, and logistics support. By training with the appropriate units, they can also be used for insertion of SOF, hydrographic survey teams, or R&S teams; carry approximately 10 (SH-60B) to 20 (MH-60S) troops for limited assault support, providing a potential longer range substitute to the UH-1N.

In fulfilling its traditional role of support to the Sea Combat Commander or the Surface Warfare Commander and Antisubmarine Warfare Commander for developing the surface and subsurface COP, the SH-60B can also contribute to the intelligence collection necessary to either ensure safety of flight along the route or to locate and identify potentially hostile contacts.

3.2.2.2 Ashore Arming and Refueling

If required to support the long range raid, the Air Combat Element (ACE) commander may elect to establish a FARP; a temporary facility organized, equipped, and deployed to rapidly refuel and rearm assets simultaneously, both aviation and vehicular. Using the CH-53E and its Tactical Bulk Fuel Delivery System (TBFDS), the FARP

can provide a maximum 2,400 gallons or 16,320 pounds of JP-5. If the Marine KC-130 tankers are available in theater, their Rapid Ground Refueling (RGR) system may also be used to establish a FARP at an expeditionary airfield (EA). The advantage of the RGR is the ability to refuel more aircraft faster than is possible with TBFDS. Planners may also consider the use of already established joint, allied, or coalition EAs, forward operating bases (FOBs) or FARPs as was done for operations in Afghanistan and Iraq.

The ability of the ESG to support refueling and/or rearming operations ashore is limited to that support which can be transported ashore by the Navy's embarked Naval Beach Group elements to establish a FARP. While the LCU has the ability to transit significant distances, its speed limitations would preclude it from likely participating in an effort to create a FARP ashore. Conversely, the ESG is could offer the use a landing craft, air cushioned (LCAC) to deliver the MEU's Aviation Refueling Capability (ARC) truck ashore to establish a FARP near the beach.

When trained to support such operations, Navy planners can propose that Navy personnel augment FARP sites to support operations that may extend beyond a brief duration.

3.2.2.3 Airborne Refueling Support

The ESG typically has no forward deployed organic airborne refueling capability. If airborne refueling is required, Navy planners must coordinate non-organic tanker support with the MEU's KC-130s, a Carrier Strike Group (CSG) or other theater assets.

Non-organic options for refueling aviation assets involved in the raid include the use of fixed wing tanker support that can be provided by Marine KC-130 tankers or Air Force Special Operations Force (SOF) MC-130 COMBAT TALON tankers typically used to tank MH-53J PAVE LOW III and HH-60G PAVE HAWK helicopters. These tankers can provide 6,000 gallons or 40,800 pounds of JP-5. While unable to refuel helicopters, if an S-3 or F/A-18 E/F tanker is available from a CSG, it can provide tanker support to the AV-8B. However, these options can require up to 96 hours to be made available for the operation, allowing for time to task the mission and complete the transit. In addition, each combination of tanker and receiver aircraft has slightly different flying qualities. If airborne tanking is part of the raid plan, the raid aircraft will require practice plugs with the tanker prior to mission execution.

Note

Although KC-130 aircraft are assigned to the ACE of the MEU, the KC-130s are not regularly part of the forward deployed force, so the aircraft must be requested and moved into the theater, which may take days to complete.

3.2.3 Submarine Considerations

As noted in Chapter 2, the most significant planning consideration for the employment of the ESG's submarine in support of a long range raid is the associated waterspace management for the employment of submarines for any operation. Issues related to waterspace management notwithstanding, the submarine can provide planners with numerous options ranging from insertion of advance forces and intelligence collection to direct support by striking with its TLAM missiles or engaging surface and subsurface hostile contacts with its torpedoes.

It is imperative that planners remain ever mindful of the communications restrictions that may be associated with a submarine in support of the operations; generally, submarines are only able to receive and transmit information via its communications suite except at pre-determined times and, as such, is limited in receiving changes that might rapidly unfold in a long range raid.

3.2.4 Future Capabilities

Expeditionary systems soon to be fielded will provide expanded range, lift, speed, sensors, and firepower to the long range raid. Unmanned aerial vehicles (UAVs) will provide persistent ISR. Next-generation aircraft, such as the Joint Strike Fighter (JSF), MV-22 Osprey tilt-rotor aircraft and CH-53X, coupled with the Expeditionary Fighting Vehicle (EFV) will provide increased range, lift, and striking power for air and surface options to support the long range raid.

To improve fire support, the Extended Range Guided Munition (ERGM) being fielded in CGs and DDGs will advance the range of NSFS from the ESG out to 60 NM. Tactical Tomahawk will be able to loiter and can be programmed in flight to attack a target via GPS coordinates.

Aircraft and UAV sensor improvements will provide optical, infrared, audio, seismic, radiological, magnetic, and thermal returns. These sensors will guide fast, precise strikes from the JSF aircraft to a rapidly changing battlefield. Information operations conducted from the ESG will complement these strike missions with the capability to conduct non-kinetic attack at vital enemy systems. High-speed lift by the MV-22 tilt-rotor aircraft, CH-53X, and EFV will provide flexibility in support of power projection forces while also increasing sustained support.

The LPD 17 class will improve the command and control capabilities of the ESG with its Shipboard Wide Area Network, Cooperative Engagement Capability (CEC), Extra High Frequency (EHF), and Super High Frequency (SHF) satellite communications. Designed for power projection by embarked Marines and SOF, it will be compatible with Joint and Marine Corps helicopters, the MV-22 Osprey vertical take off and landing aircraft, as well as the EFV.

3.3 FUNCTIONAL CONSIDERATIONS

Besides the platform considerations discussed above, planners should also consider some functional areas within the ESG. For instance, the Joint Intelligence Center (JIC) of the LHA/LHD, working with MEU counterparts, supports the raid through Intelligence Preparation of the Battlespace (IPB), while the ESG also provides a robust IO and Information Warfare (IW) capability. In discussing IPB, this section also covers the supporting tasks of collection management and ISR. Likewise, the discussion of IO/IW focuses on those aspects for which the ESG has capabilities: Military Deception (MILDEC), Operational Security (OPSEC), and Electronic Warfare (EW).

3.3.1 Intelligence Preparation of the Battlespace

Key to conducting the operation will be the need to conduct the IPB, an extremely important element of the planning and C2 process. IPB by definition is a systematic, continuous process of analyzing the threat and environment in a specific geographic area, and provides planners with important elements to consider in deriving the various courses of action (COAs). IPB defines the methodology employed to reduce uncertainties concerning the enemy, environment, and terrain for operations, and is used to analyze, develop, and support decisions and other battlefield requirements that must be considered in support of COA development. During the IPB process characteristics of the battlefield that influence friendly and threat operations are identified, and area of interest (AOI) limitations, gaps in current intelligence holdings, and initial intelligence collection efforts are established, to include overwater and littoral requirements. From this continuous monitoring of an AOI, changes in enemy positions, strength, identification of weapon systems, and locations can be ascertained.

Planners and members of the intelligence collection team must take advantage of IPB inputs that can come from several basic intelligence sources or collection disciplines that can be either organic to the ESG or requested from a non-organic source. Theses sources or disciplines include; Signals Intelligence (SIGINT), Communications Intelligence (COMINT), Electronic Intelligence (ELINT), Foreign Instrumentation Signals Intelligence (FISINT), Imagery Intelligence (IMINT), Measurement and Signature Intelligence (MASINT) Human Intelligence

(HUMINT), Open-Source Intelligence (OSINT), and Geospatial Intelligence. Appendix B provides ESG organic and non-organic ISR assets and is a ready reference in utilizing the ESG assets in a focused effort towards IPB in support of the long range raid.

3.3.1.1 Collection Management

Collection management is a process of intelligence compilation, review and action that is critical to the intelligence community's efforts to facilitate the development of situational awareness for commanders and their staffs and assigned commands. As such, it cannot be stood up only in response to the tasking to complete a long range mission; though its importance to a long range raid or any operation cannot be over stated.

The collection management of the available intelligence information is a responsibility of the ESG's Collection Management Board. This Board teams together senior intelligence and staff planning personnel of the Navy staffs, ships, and embarked MEU commands to formulate, prioritize, coordinate, track, and resolve all of the information requirements to support a mission. The collection management process begins in the JIC aboard the LHA or LHD. It is the JIC that serves as an all source collection and fusion hub for the ESG, and it is from this foundation that the ESG staffs establish a footing to plan and control operations.

Within the collection management process, and early in the planning phase, the MEU and ESG commanders and their subordinate commanders and staffs will identify the commander's critical information requirements (CCIRs). These CCIRs will have two key subcomponents: critical friendly force information, and priority intelligence requirements (PIRs) regarding enemy forces and intentions. The PIRs drive the focus of the intelligence collection plan as they represent critical pieces of intelligence the MEU commander must know by a particular time to plan and execute a successful long range raid. Those items of information regarding the adversary and the environment that need to be collected and processed in order to meet the PIR are known as information requirements.

Each unfilled information requirements generates one or more specific requests for information (RFIs). Again, the Collection Management Board is responsible for translating the MEU commander's PIRs to information requirements and thence to RFIs. If it is determined that new, finished, intelligence derived from original research is required then the JIC identifies the need as a production requirement (PR) to the next higher echelon. If it is determined that insufficient information exists to answer the RFI, then a collection requirement is prepared in accordance with the appropriate Defense Intelligence Agency (DIA) manual to task the appropriate system(s).

As an example, a PIR might be the location and intentions of a mechanized force that could reinforce a raid site; and the information requirements that would be derived from the PIR submitted might include such questions as:

1. Have there been any recent changes in activity at logistics and maintenance sites associated with the unit?
2. What recent changes in communication activity at command and control nodes associated with the site have been noted?
3. What are the locations of key unit commanders of the mechanized force?
4. Has there been any observation of recent training or range activity by elements of the mechanized force?

Actions for which the Navy units of the ESG are well suited to support the collection effort could include supporting the effort against the enemy's communications nodes. Here, the PIR could be met by COMINT monitoring by the Ship's Signals Exploitation Space (SSES) aboard the CG.

Similarly, if the enemy order of battle includes maritime units, the board must designate these vessels as critical contacts of interest (CCOIs), while other vessels in the area of the operation that could influence the mission should be designated as contacts of interest (COIs). For example, a fishing vessel known to have been used by

the enemy in the past to smuggle arms, which now appears to be tracking the ESG as a picket ship would be designated a CCOI, and the Sea Combat Commander (SCC) or Surface Warfare Commander (SUWC) would be responsible for developing and executing options to deal with this situation.

Note

In general, designating a vessel as a CCOI indicates a willingness on the part of the ESG to use organic subsurface, surface, and air assets to continuously track and monitor the CCOI; efforts which could impact their ability to support other facets of the operation. Once more, it becomes the responsibility of the Collection Management Board to provide a prioritized plan that can be supported by the ESG commanders.

The OSINT capabilities of the Navy units within the ESG and other forward deployed naval forces should not be overlooked when coordinating the planning of a long range raid. For example, theater after action reports submitted by ships on recent port visits is data-based and may provide useful planning information. Similarly, port guides provide documented information on various navigational concerns, while messages to naval attachés can provide relevant information to support raid planning. Similarly, planners should look to reports that have been filed by theater assets that include the EP-3E Aires II, RC-135 Rivet Joint, RC-12 Guardrail, P-3C Orion, the E-8C Joint Surveillance Target Attack Radar System (JSTARS), and E-3 Airborne Warning and Control System (AWACS); as well as to request these assets as non-organic support. When requesting support for a long range raid, specifics regarding the information to be collected, target(s) to be collected against, and a detailed communications plan are required to ensure the request receives the priority and consideration it deserves.

3.3.1.2 Intelligence, Surveillance, and Reconnaissance

ISR of the threat is often difficult to obtain and more difficult to accurately update. Areas of control can change rapidly and may be confusing. Long range raid planners must anticipate rapid changes in the threat and the potential for incomplete information. Within the ESG are extensive capabilities to support the long range raid; e.g., SH-60B and MH-60S helicopters with FLIR and night vision devices (NVDs) and SSES. Additionally, planners should look to use, when embarked, UAV with data link video and request non-organic aircraft with electro-optic reconnaissance systems be made available to provide a focused investigation of specific areas. These systems, coupled with space-based ISR assets, electronic intelligence systems, voice interceptions, and direction finding (DF) platforms networked with ground-based systems, all feed into the JIC. When fused into a cohesive intelligence picture they provide significant long range raid support, with a resultant reduction in the mission's risk.

3.3.2 Information Operations and Information Warfare

IO are those intelligence counter activities conducted in battlespace already shaped by peacetime regional and theater engagement activities; and can serve to enhance the effectiveness of the forces assigned to complete the long range raid mission. When and where permitted, the CWC will be responsible for coordinating and directing the ESG's effort.

During joint operations, the JFC provides guidance and direction for conducting IO to support the mission, concept of operations, objectives, and intent. IO and IW are synonymous terms. The elements of IO are performed during peacetime operations; while these same elements performed during conflict are termed IW. Five elements comprise IO/IW. Three of these elements are supportable by an ESG: MILDEC, OPSEC, and EW. The other two, Psychological Operations (PSYOPS) and Computer Network Operations (CNO), are normally not performed from an ESG. Only the ESG-supportable elements are discussed here. However, all five elements may be ongoing in the theater under control of a JFC and could be leveraged by the ESG to support the mission.

The improvement in IO/IW capabilities over the ARG/MEU is one important long term benefit of the ESG. With the addition of the CG, DDG (or DD), FFG, and SSN, the ESG presents a more capable and difficult threat to a potential adversary. Given effective and proactive IO/IW planning, with the advent of ForceNET and network centric warfare, the ESG units do not have to be collocated to be mutually supporting. A lone surface unit off of the coast could be performing independent steaming or conducting advance force operations for the ESG. The additional sensors and weapons within the ESG have a significant adverse impact on the enemy's risk management problem. From the enemy's point of view, overwhelming force has become more unaffordable, and the probability of the suicide mission getting through is greatly reduced. Additionally, in general, it is more difficult for the enemy to deduce the intentions of a dispersed force than one that is collocated.

The ESG now has sufficient numbers, variety, and capabilities, that time permitting, can be used to benchmark "normal" enemy air, surface, and electronic activity; conditioning enemy responses. The ESG can also effectively, and if need be covertly, integrate non-organic capabilities to build a more complete and accurate operational picture before deciding when and where to strike.

3.3.2.1 Military Deception

Navy planners can offer to support the long range raid and reduce the risk to the raid force by utilizing Navy elements of the ESG as part of MILDEC operations; operations that by definition could include a feint, demonstration, ruse, or display, or a combination of these operations. MILDEC operations can range from being simplistic to complex, but it must always be remembered that whatever plan is adopted it will depend on an integrated effort by the entire ESG to create a believable story. When developing these operations, one area that planners should consider is COAs that were rejected in the development of a feasible COA; which, in some instances, can prove to be particularly effective as the basis for MILDEC operations.

The number, variety, and capabilities of ESG assets provide a greatly expanded opportunity for MILDEC when compared to an ARG. As stated above, preparing a plan that will include MILDEC will require a commitment on the part of the forces involved to make the deception believable; including, possibly to the short-term detriment of some other aspects of the operations. For example, TLAM ships can make a contribution as part of a tactical deception plan by striking targets throughout the enemy’s depth, be party to conducting false insertions, and conducting conditioning helicopter flights for several days or nights before the operation. As a result of these actions the enemy may become accustomed to regular activity and fail to associate this activity with a specific raid target. Conversely, some actions can be accomplished with minimal impact; e.g., deceptive lighting, emission control (EMCON), and directing ships to emulate other ships with appropriate electronic emissions and/or aircraft operations, all of which can confuse the enemy. In the end though, planners must not lose sight of the fact that the ESG, large as it is, still remains limited and as such a potential area of asset allocation conflict could arise for use of valuable assets that may be in short supply.

3.3.2.2 Operations Security

OPSEC is a full time process practiced by all military members regardless of the mission, from peacetime through conflict. OPSEC is well understood, and when OPSEC is not practiced can easily eliminate the element of surprise needed for a long range raid.

Specific to ESG support for long range raids, operations with elements of the raid force and raid support missions by ESG units must be planned and rehearsed until they are routine to ensure OPSEC can be maintained during actual execution of the raid.

Code words, daily changing call signs, and authentication methods thwart information compromise. Use of Non-secure Internet Protocol Routing Network (NIPRNET) and the Secure Internet Protocol Routing Network (SIPRNET) and awareness of Information Condition (INFOCON) conditions are all necessary to safeguard information. Collection activities on and by the targeted country will vary in sophistication and methods, and

seemingly clever methods to disguise passing selected information could be discovered and result in a tremendous loss of sensitive or classified information. For example, the simple use of a birthday or other dates to pass frequencies is easily exploited and can serve to complete a much larger intelligence picture. The vulnerability to compromise is a two-way street. ESG commanders must likewise work to control the passing of information through non-secure telephone circuits, including mobile phones and International Maritime Satellite (INMARSAT).

Relatively little technical sophistication is required to monitor and conduct simple traffic analysis of commercial telephone and Internet protocol (IP) based systems. If INFOCON only changes when something operationally significant has happened or is about to happen, setting a particular INFOCON condition may compromise intentions. One recommendation is random and irregularly INFOCON changes. Another option is small, select group of personnel authorized to conduct benign web browsing, chat, email, and telephone activities to fill the void when INFOCON is set for operational reasons.

3.3.2.3 Electronic Warfare

EW is a military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy. Within EW there are three separate but important divisions; electronic warfare support (ES), electronic warfare attack (EA), and electronic warfare protection (EP). As discussed in paragraph 3.2.2.1, Collection Management, the ESG has several ES capabilities to produce SIGINT. Similarly, ships within the ESG have the SLQ-32 and super rapid blooming off-board chaff (SRBOC) that provides both EA and EP. Depending upon the versions installed (e.g., V1, V2 or V3), the SLQ-32 can provide a range of jamming or deception to enemy weapons systems. Likewise, depending upon the sophistication of the threat, the Navy planners of the ESG may also be able to use EMCON to deceive the enemy regarding location, composition, and intentions of the ESG.

3.4 FINAL PLAN CONSIDERATIONS

Rapid preparation is required to execute a mission within the 6-hour standard, and includes planning, rehearsal, and logistic preparations. The force however cannot wait for the completed plan before conducting preparations that each unit in the ESG must accomplish in order to support the long range raid. SOPs, operational checklists, and initial guidance allow these preparations to start concurrently with long range raid plan development. The faster ESG Navy and MEU staff planners can prepare and brief the operational plan, the quicker supporting plans and preparations can be integrated. Critical to the success of the operation is the need to ensure that key ESG and MEU unit personnel have a clear understanding of the operation and what their responsibilities will entail; essentially, that they know the results of all of the planning effort. Three key tools for ensuring that all of the parallel preparations remain coherent are the Go/No Go criteria, which define the minimum acceptable conditions for raid execution; the Execution Checklist, which will keep all participants informed of the progress of the raid, and the Confirmation Brief, which disseminates the final plan to all participants and resolves any last minute issues.

3.4.1 Go/No Go Criteria

As part of the planning process for the long range raid, the MEU commander will develop specific Go/No Go criteria depending upon mission, forces available, threat, and environment. While all of the support provided by the Navy elements of the ESG to the long range raids will be useful and welcome, some particular support issues will be critical to the success of the raid and will be identified with specific Go/No Go criteria. To aid the planners in identifying critical support issues and developing the minimum level required for mission success, Appendix D provides a list of the key support issues that may form the basis for a particular Go/No Go criterion.

3.4.2 Execution Checklist

The Navy elements of the ESG can play a critical role in ensuring information relating to the conduct of the operation is ultimately and accurately relayed to the commanders by distributing execution checklists to all watch stations and radio operators. Atmospheric conditions and technical problems have repeatedly been a barrier to the passing of information, and it is not uncommon that personnel designated to monitor and report information received via radio circuits have been unable to fulfill their duties for any number of other reasons. Thus, the success of an operation may rely on one unit or person who has been able to receive a necessary report from the execution checklist and is able to pass this information up the chain of command or enable it to be validated.

MEUs have long used execution checklists to ensure brevity, reliability, security, and accuracy of communications during the execution of missions. To this end, the execution checklist contains a list of specific actions that are expected to occur during a mission in their relative time order; and each unit in the raid has their own radio call sign. To facilitate brevity, a series of code words is assigned to each action. Upon accomplishing an action, the unit transmits their call sign, the appropriate code word, and the time on any available circuit. The most likely methods of transmission will be via satellite telephones, air to ground line of sight radios and air to air line of sight radios. Any other unit that receives the Execution Checklist report relays the original transmission, exactly as given, with the ultimate destination as the Landing Force Operations Center (LFOC) onboard the LHA/LHD.

The keys to making the execution checklists work are to ensure that all units that could possibly receive and forward a call have a copy of the checklist, and that everyone forwards reports exactly as they are received without modification, editing, or interpretation.

3.4.3 Confirmation Brief

A Confirmation Brief is conducted prior to the execution of the mission and concludes with on-station and unit briefs following the confirmation brief. The MEU Commander's Confirmation Brief provides a detailed review of each phase of the long range raid by all participating units, and is conducted according to the standard operating procedure (SOP) of the MEU and its confirmation brief checklist. Additionally, as part of the brief, a time hack/time check is conducted and the execution checklist distributed.

The ESG must be prepared to support the confirmation brief with their respective required briefings and other support as requested. When practicable, every unit within the ESG shall send one or more representatives to the confirmation brief. Getting all of the required participants to the flagship for the brief usually involves extensive cross-decking of personnel by helicopters and small boats belonging to the ESG; all of which could be impacted by weather, distance and time. In particular, getting a representative to and from the SSN requires extensive planning and coordination and must include a review of the tasking for the SSN.

As an alternative to the challenges of conducting the cross-decking of personnel, Navy planners can offer to assist in coordinating video data links, when ships are so configured, that could enable some commands to meet both stationing requirements and the need to physically attend the brief. Likewise, using video teleconferencing, and recording the brief for later playback, can also expand the audience for the confirmation brief as space limitations within the command ship will generally preclude many non-essential, but none the less key persons, from attending. Other options for support could include using email and chat as a way of linking non-attendees into the brief, but these methods require acknowledgement of receipt and understanding.

CHAPTER 4

Deep Operations and Close Battle Support

4.1 INTRODUCTION

As discussed in Chapter 1, a long range raid is part of deep operations within a theater. Deep operations are in the area where the operational commander has the maximum amount of leverage for dictating the conditions and course of the battle on terms, time, and place of choosing. However, this leverage brings with it a concomitant increase in the complexity of risk management and likely level of support the raid force commander will need to accomplish the mission, to include possible support from outside the ESG (i.e., non-organic support). Should the enemy elect to stand and fight at the raid site requiring supporting arms coordination; a close battle will also develop.

Because the types of support that can be provided by the Navy elements of the ESG to the long range raid in deep operations and a close battle are often similar and frequently tightly linked, this chapter presents both simultaneously. This chapter presents a review of the general support categories for operations and then examines specific support missions that can be provided by the Navy element of the ESG. In the process of the review, it likewise provides recommended considerations.

4.2 SUPPORT CATEGORIES

Requests for support are divided into two categories, preplanned or immediate. Preplanned support can be further divided into two subcategories: preplanned scheduled and preplanned on-call. Scheduled missions are those for which a need was anticipated and the time, place, and means of execution are known in advance, while on-call missions are those for which a need was anticipated but the time, place, or means of execution are variables. Unanticipated support requirements that occur during the execution of the raid, perhaps as a result of enemy actions or weather, will result in immediate requests. It is important to note that preplanned resources assigned to a lower priority mission will generally be used to fill such immediate requests as scarce resources and time/distance considerations will preclude “scrambling” assets to meet the emerging need.

Navy support to deep operations is primarily by means of preplanned scheduled or preplanned on-call missions. To account for actions by the enemy or other contingencies, support to the close battle is accomplished primarily by preplanned on-call and immediate missions. A Tomahawk land attack missile (TLAM) strike against a communications facility between the raid site and potential reinforcements with a time on target coordinated with the arrival of the raid force on their objective provides a preplanned scheduled mission for deep operations. The Navy component of the ESG can also provide support by controlling a section of AV-8Bs at their assigned holding point, having them wait until called in on a close air support (CAS) mission at the raid site, which is a preplanned on-call mission in the close battle. Similarly, a helicopter providing logistics support to the Forward Arming and Refueling Point (FARP) that is diverted to perform casualty evacuation (CASEVAC) from the raid site represents a preplanned mission from deep operations diverted to an immediate mission in the close battle.

4.3 SUPPORT MISSIONS

Organic to the ESG are Navy capabilities to provide a multitude of support missions to the long range raid, such as communications relay, strike and fire support (e.g., TLAM strike, naval surface fire support, and air control for AV-8B and AH-1W CAS sorties), SH-60B and MH-60S assault support sorties, airspace and fire support coordination, air defense, maritime superiority, medical support, search and rescue (SAR), logistics support, information operations, and coordination of non-organic support. The following sections discuss each mission, in turn, from the perspective of deep operations and the close battle. Two points should be kept in mind: (1) many of

these missions will either be conducted also in support of rear operations or to the detriment of rear operations, and (2) Rules of Engagement for operating in deep operations or the close battle must be requested and understood (as discussed in Chapter 2).

4.3.1 Communications Relay

Maintaining effective communications among the raid force and other units of the ESG is one of the highest priorities for the long range raid. While the raid force will seek to maximize the use of satellite radio and telephone circuits, line of sight very high frequency (VHF) and ultra high frequency (UHF) radios and long range high frequency (HF) communications are planned for redundancy. The Navy can support this mission in two ways: using Navy helicopters as airborne relays and providing increased numbers of transceivers from the additional ships.

As introduced in Chapter 3, Navy SH-60B and MH-60S can provide communications relay. If the air defense posture permits, these aircraft can be stationed forward in a high orbit to provide for line of sight VHF and UHF radio relay to ranges of 200 nautical miles (NM) or more. If compromise of the raid force is a concern, then SH-60B or MH-60S may delay climbing to relay altitude until after the raid force is on the objective. The additional ESG ships may offer associated support to airborne relay helicopters by conducting helicopter in-flight refueling (HIFR) or servicing them on deck.

The additional surface units of the ESG provide increased numbers of HF, VHF, and UHF transceivers to the force. These extra ships open the potential for a network stationed at various locations to serve as relay platforms. As available, the units may be tasked to guard specific raid force circuits, since the preponderance of the operation is likely to rely upon air assets and, per joint doctrine, air request nets are generally HF voice circuits. However, guarding such circuits typically takes more effort on the part of the radio control facility and the operator than other communications circuits, so individual units may want to pre-designate equipment to be groomed and personnel trained for this mission.

4.3.2 Strike and Fire Support

The Navy elements of the ESG can provide both strike and naval surface fire support (NSFS) to the long range raid. NSFS is available from the cruiser (CG), guided missile destroyer (DDG), destroyer (DD) or frigate (FFG) using the ships' guns, provided the raid site is within 15 NM of the coast. While NSFS is ideally suited for preplanned on-call and immediate missions in the close battle, TLAM is best used for preplanned scheduled and preplanned on-call missions in the deep operations. In this way, the CGs and DDGs can support the mission with their TLAM missile systems against fixed targets that are deeper inland. However, during the course of the long range raid, preplanned on-call TLAM missions will expire due to time of flight limitations, which should be tracked by the Supporting Arms Coordination Center (SACC), working with the Strike Warfare Commander (STWC). Note that two types of TLAM are available: TLAM C provides a conventional unitary warhead, optimized for point targets and TLAM D carries a conventional submunitions warhead to dispense bomblets against area targets.

Note

Planners and controllers/fire support coordinators must remain mindful that cluster munitions such as the TLAM D, the Cluster Bomb Units (CBUs) dropped by aircraft, or the Dual Purpose Improved Conventional Munition (DPICM) used by artillery that may already be in theater with the joint force can have a significant dud rate that establishes a minefield to deter or delay enemy forces. As a result, the ESG does not want cluster munitions dropped in close proximity to the raid force or anywhere the raid force might have to traverse or operate.

It should be noted that position requirements for TLAM and NSFS shooters will limit the movement of these ships, if also needed for rear area operations.

4.3.3 Airspace and Fire Support Coordination

The Tactical Air Control Center (TACC) and SACC are existing entities that integrate navy support to a long range raid through the airspace and fire support coordination missions. Both have the ability to coordinate organic and non-organic assets. For an ESG, the resources of the Aegis-equipped CGs and DDGs, as well as the additional air search, surface search and fire control radars of the DDs and FFGs markedly add to the raid force's potential sensors and complement the abilities of TACC and SACC.

The MEU's Air Combat Element (ACE) and the Landing Force Operations Center (LFOC) can be supported by TACC by tracking fuel, ordnance, and aircraft status for CAS missions and directing aircraft to designated ships or non-organic airborne assets, if assigned, to be refueled and/or rearmed as appropriate. Because air control in the deep battle is procedural not positive, TACC working with their MEU(SOC) counterparts may want to establish a single directional flow (i.e., clockwise or counterclockwise) for assets moving to and from the raid site. This aids in preventing mid-air collisions at night while flying on night vision devices (NVDs) and in friendly force identification and return to force (RTF) procedures, which should also extend to the rear area. While perhaps impracticable due to predictability for sustained overland operations, past operations indicate the mishap and fratricide avoidance benefits outweigh the risk of being predictable to the enemy over the course of a single long range raid. Of course, terrain, obstacles, orientation and size of the landing zones at the raid site, and weather (particularly winds) will probably determine the geometry of the flow at the raid site for the ACE. The flow plan should also build in Low Level Transit Routes (LLTRs) that are required for helicopter routing, and Minimum Risk Routes (MRR) for fixed wing aircraft and TLAM flight paths. Coordinating Altitudes (CA) among fixed, rotary wing, and UAVs may also be required.

For air controllers, when AV-8B aircraft are used for CAS, they typically are held at elevations well in excess of 10,000 feet to avoid AAA and man portable air defense systems (MANPADS), such as the SA-7, SA-14, and Stinger; as well as to maximize fuel economy. Even if not armed with AIM-9 Sidewinder missiles for air defense, the AV-8B's holding profile may be indistinguishable to the enemy from a section of CAP aircraft and serve to discourage enemy air activity in response to the raid.

When operating within an established theater, it may take anywhere from 24 to 72 hours from submission of the airspace control measures request (ACMREQ) to activation and publication in the Airspace Control Order (ACO) and Special Instructions (SPINS). To maximize flexibility and opportunities for deception, multiple LLTRs and MRRs may be requested, approved, and then activated as needed. In addition, for non-organic air assets requested, the ESG will need to provide holding points and Combat Air Patrol (CAP) stations forward near the raid target with appropriate reset points back inside the protection of ESG air defense systems in the event of a specific threat to a high value unit in the rear area.

In addition to SACC's standard fire coordination efforts regarding organic fires, SACC will have additional roles in an established theater. For instance, locations where friendly ground forces will be introduced for the raid should be requested to be added to the No Hit list with accompanying No Fire Areas (NFAs) by SACC (via the ESG Target Board discussed earlier). To maximize the effectiveness and responsiveness of combined arms in deep operations, the Joint Force Commander (JFC), working through the Joint Force Fires Center (JFFC) may employ the concept of "kill boxes," using a grid system to demarcate the battlespace and then opening or closing various combinations of grid squares based upon the presence of known hostile forces and the absence of friendly forces. If kill boxes are employed, SACC needs to coordinate with the JFFC to ensure that the grid areas of the raid site and adjacent areas are "closed," and that these areas will become "open" only if requested by the MEU(SOC) commander and coordinated with the JFFC via SACC. Again, SACC's coordination measures should extend from deep operations to the rear area and should be coordinated with TACC's directional aircraft flow.

4.3.4 Air Defense

The limited non-permissive environment expected to be encountered by an ESG suggests a small air order of battle for a potential enemy. Additionally, recent operations and some post-action reports indicate that due to the high cost of the aircraft and the long lead times required to train aircrews, some nation's aircraft squadrons that have operated against United States forces in the past will tend not to fly when confronted by a sophisticated threat, resorting instead to using surface to air (SAM) missile systems and anti-aircraft artillery (AAA) as their primary means of air defense. Still, the potential for an air threat in the area of the deep battle cannot be discounted.

Organic to the ESG are the capabilities to detect and track high altitude air contacts out to 250 NM and the ability to potentially engage them out to 90 NM. Performance against low and medium altitude air contacts is limited by terrain and the radar horizon. Properly stationed, with the right terrain, and an accurate radar prediction based upon Digital Terrain Elevation Data (DTED), the guided missile units of the ESG can provide high altitude air defense to approximately 50 NM inland. A full discussion is beyond the scope of this Tactical Memorandum (TACMEMO), but further information is available in Naval Warfare Publication (NWP) 3-01.01 *Antiair Warfare* and appropriate class tactical manuals or ship's information books.

When operating in the littorals in support of deep operations, threat ground controllers could still maintain a flight advisory perspective, providing opportunities for threat aircraft, including low-slow fliers, to attack ESG ships. Likewise, tuning a ship's radar for an overland mission limits use for rear area operations (although detection of threat aircraft approaching from the overland area covered by the radar would benefit the rear area).

4.3.5 Maritime Superiority

While the main role of maritime superiority concerns the protection of ESG shipping (and will be discussed more fully in the next chapter on rear area operations), maritime superiority also supports deep operations and the close battle by allowing for safe overwater movement of the raid force. Likewise, it enables ESG ships and surface craft to operate close to shore to support deep operations and the close battle through the missions discussed earlier, such as TLAM and NSFS support. Navy planners should consider what assets are needed to develop the common operational picture that identifies critical contacts of interest (CCOIs) and contacts of interest (COIs). If the ESG is split to provide support to deep operations, the ability to provide maritime superiority for multiple vital areas should be considered. For instance, a CG stationed close to shore to provide NSFS missions may need to have a helicopter assigned to it for sufficient protection from an enemy combatant, suicide craft, or fast inshore attack craft (FIAC). Again, there is a ripple effect to using multi-mission assets to support deep operations that affect the conduct of rear area operations..

In addition to the surface threat, maritime superiority addresses the undersea threat posed by submarines and mines. The anti-submarine warfare capabilities of a particular ship may make it the right choice for supporting the raid in terms of deep operations, since it stands a better chance of protecting itself. Additionally, ship positioning may be able to minimize the submarine threat by limiting threat axes, but positions suitable for support may limit this somewhat. Against mines, the best defense is to keep mines from entering the water. Since this represents a demanding ISR task with limited ISR assets, mines may make it into the water. Given likely raid timelines, mine avoidance may be the only option, which still relies on knowing where the minefields are located.

Overall, the ability to provide maritime superiority (and thus reduce risk) to ESG assets operating in the littorals should be weighed against the need for their support missions. Although the use of these assets to support the raid may seem daunting or unworkable, one must remember that the ESG will be operating in a limited non-permissive environment, so the ESG may only face one or two of these threats—not all of them at once.

4.3.6 Medical Support

The Navy may provide at least two forms of medical support to the raid. First, the amphibious assault ship (LHA/LHD) with its associated Fleet Surgical Team is ideally suited to provide the MEU(SOC) commander a limited medical capability forward at an intermediary site, depending upon raid distance, geometry, threat, and availability of expeditionary airfields between the ESG and the raid site. Other ships within the ESG have a range of support that their medical personnel can provide, but none are typically outfitted to perform advanced life saving procedures. Limited as these facilities may be, they may still be able to play a role in an emergency; such support having been anticipated and medical personnel with select equipment having been dispatched to the ship. Second, an SH-60B or MH-60S helicopter may be configured for CASEVAC. This would not only free up scarce CH-53E assets for the raid force, but it could also be done in conjunction with one of these helicopters providing support as a communications relay. The ability of these helicopters to provide multiple support missions to deep operations and the close battle may outweigh the reduced capability available for rear area operations.

4.3.7 Search and Rescue

During the overwater transit portion of any long range raid the ships can support the raid force in the conduct of a SAR mission. Similarly, the embarked MH-60S or SH-60B helicopters can be utilized to augment any search or rescue. In addition to their overwater SAR capability, the MH-60S or SH-60B helicopters provide a limited overland SAR capability out to approximately 200 NM. As discussed earlier, using the helicopter for SAR (either as a preplanned on-call or immediate mission) will likely pull the asset away from a preplanned scheduled event also supporting the raid. In addition to these Navy capabilities, the MEU provides an extensive Tactical Recovery of Aircraft and Personnel (TRAP) capability, but combat SAR outside of these capabilities requires the use of Special Operations forces. During routine operations, the Joint Search and Rescue Coordinator (JSRC) may treat the ESG as a resource provider. Part of TACC's coordination supporting the raid should be with the JSRC to ensure that a TRAP package isn't called away, since that would significantly, temporarily, impact the ability of the MEU(SOC) to execute a long range raid.

The JSRC duties within a theater are typically assigned to the Joint Special Operations Task Force (JSOTF) commander. However, the ESG may be designated the alternate coordinator, or tasked as a Regional Search and Rescue Coordinator (RSRC). Navy personnel assigned to the TACC should be prepared to assist as a RSRC.

4.3.8 Media and Distinguished Visitors Support

The media and distinguished visitors are certain to be associated with regular operations as well as at such times that could interfere with a long range raid. As such, they will require aviation support. It will be imperative that planners coordinate with public affairs officers within their respective commands to contact any outside agency coordinating visits to restrict such visits.

The media generally has a news cycle different from the theater battle rhythm and will pressure the commanders for information. The release of all information must be carefully controlled, as this news cycle tends to impact the information cycle of senior military commanders as well. In an established theater, the Joint Information Bureau (JIB) and the Joint Visitors Control Bureau (JVCB) are responsible for media and visitors and are often combined or collocated. Since a long range raid may be a high-interest event with the media, a response to a potential request for embedded media within the ESG to go down range should be prepared.

The long range raid mission requires early coordination with the JIB to ensure requirements for Combat Camera products are well understood along with the delivery and dissemination process. Coordination with the JVCB can minimize or eliminate media and high level visitor events not related to the raid, mitigating their impact on the mission. Conversely, both may also be important resources as part of operational deception (OPDEC) and operational security (OPSEC) planning, although any such effort will require high-level approval above the ESG.

CHAPTER 5

Rear Area Operations Support

5.1 INTRODUCTION

In terms of supporting the long range raid, much of what constitutes rear area operations will be normal Navy operations within the Expeditionary Strike Group (ESG) area of operations (AO). One issue that makes the rear area operations significant is that it is here where the enemy has his area for deep operations; offering them the same type of opportunities to dictate the conditions and course of the battle on terms, time, and place of choosing we exercised in our deep operations. Additionally, an inextricable link exists between deep and rear operations through multi-mission platforms that may support both areas simultaneously.

If the enemy is unable to successfully defend against the raid force, is outnumbered or has few technically sophisticated weapons, he may resort to asymmetric methods in order to achieve a measure of success. For example, a suicide aircraft or boat dispatched to sink or badly damage a single ship in the ESG may provide the enemy with a strategic victory even as he suffers a tactical defeat at the raid site. Similarly, getting our forces to strike out at a neutral unit or engage friendly forces (i.e., blue on blue) may also result in strategic victory. On the other hand, the enemy may possess sophisticated maritime assets and coastal defense systems, and the threats to the ESG will be proportionately increased. In the end, it will be essential that planners use all means available to them to develop an understanding of the enemy and are prepared to meet the threat with all available weapon systems that balances the need to also support deep operations or a close battle.

A larger AO (or one that includes coastlines) with extensive civilian surface and air activity could result in a more complex common operational picture (COP), with anomaly detection providing the earliest indication of potentially hostile activity. Responses to such activity cannot be absolute. Well defined and understood Rules of Engagement (ROE) with appropriate preplanned responses will be necessary to address the range of forms the threat can take. Intelligence will also play a significant role in rear area operations, supporting the Navy element of an ESG in conducting maritime and air operations. Likewise, logistics support in the rear area is an important area where the Navy can provide support. Finally, the Navy can coordinate non-organic support for many aspects of these operations.

5.2 RULES OF ENGAGEMENT AND PREPLANNED RESPONSES

The number of assets and capabilities within the ESG provide for a broad range of non-lethal and lethal responses to potential threats. Over the last sixty years, naval operations, including those during the Cold War, those in support of counter-narcotics operations, Maritime Interdiction Operations (MIO) in the Adriatic Sea and Persian Gulf, and recent combat support in Afghanistan and Iraq, developed a body of tactics, techniques, and procedures (TTPs) to identify and track potential threats. In addition, a series of actions, escalating from non-lethal to lethal in accordance with approved ROE, know as preplanned responses (PPRs), was developed to prevent potential conventional and asymmetric threats from interfering with naval operations. These PPRs form the basis for defending ESG assets operating in the rear area (even when an asset may be performing a mission in support of deep operations or a close battle). Working to our advantage is the general lack of sophisticated stand off weapons among most of today's potential threats. Accordingly, to harm the ESG, most threats require direct physical contact or extremely close proximity. For instance, a low, slow flier may represent a significant portion of the threat. PPRs should be established to deal with this threat, while additional doctrine and TTPs for countering the low, slow flier are in development. In the interim, Class Tactical Manuals and Appendix E contain some suggestions for countering low, slow fliers, helping to broaden an ESG’s PPRs for this threat.

5.3 INTELLIGENCE

Rear area operations will, in all likelihood, be conducted in "green water" vice "blue water," in close proximity to land. Building a detailed intelligence picture for these waters and associated airspace will be critical to ensuring the safety of the force. In order to meet the challenges of this environment and the task at hand, platforms, systems, and procedures will likely need to be adapted to conditions and threats for which they were not originally designed. Within the additional ships of the ESG (including the submarine), along with their associated Rigid Hull Inflatable Boats (RHIBs) and SH-60B helicopters, that, when added to the MH-60S helicopters, RHIBs, and Landing Craft, Air Cushion (LCACs) from the amphibious ships are systems and personnel that can provide the necessary surveillance and reconnaissance within the ESG's AO to identify potential threats. Examples include monitoring commercial maritime and aviation radio traffic; visual and night vision device observations of port and airfield activity; detection, tracking, and in many cases identification of unknown air or surface contacts; and collection of human intelligence (HUMINT) from contact with personnel ashore during ship-to-shore operations.

5.3.1 Intelligence Activities

The intelligence, surveillance and reconnaissance (ISR) and initial preparation of the battlespace (IPB) missions done for the entire area of interest (as discussed in Chapter 3) are applicable to the rear area too. The IPB should provide the enemy order of battle that can be brought to bear in the ESG's rear area, helping to define the tradeoffs between supporting deep and rear operations. Likewise, the ISR and collection management plan could be designed to build a baseline of an enemy's normal operations or provide information for a database of critical contacts of interest (CCOIs) and contacts of interest (COIs). ISR can also support targeting needs by collecting intelligence on potential targets such as cruise missile sites, mine storage facilities, minelayers, surface combatants, command and control nodes, and air defense sites located near the coast. As these potential targets may also impede Navy support to deep operations or a close battle, they represent another link between these operations that cannot be ignored.

Beyond these roles, the Joint Intelligence Center (JIC) also needs to prepare for the reception, evaluation, and dissemination of any intelligence brought back by the raid force, since the raid force could bring back highly valuable intelligence. Raid force recovery and debrief are going to present the JIC with an intensive workload and high visibility. Proper planning and, if the operation is complex enough, rehearsal are essential to success.

5.4 MARITIME OPERATIONS

A delicate balance will need to be struck by the Navy element of the ESG to support the long range raid, choosing between the requirement to be close to the action ashore and its need to provide security to the forces at sea. There is no formula for answering this challenge except to note that the pace of the operation will certainly influence any such decisions as will the need to safely extract the raid force and quickly resume a posture of conducting operations from beyond the visual and radar horizon. In the end, a diverse plan that exploits the maritime area in three dimensions will be required, as maritime operations will include surface operations, surface operations interspersed with air support, and subsurface operations. The plan could also include mixing military deception operations, conducted in close proximity to land, with the general requirements of supporting and defending the ESG. Such a plan will also generate a heightened need for situational awareness and vigilance on the part of all watch teams.

Choosing sea echelon areas away from popular fishing grounds or busy approaches to ports, when possible, can go a long way to reducing the enemy's ability to use these pleasure boats or fishing craft to mask a threat. An operating area of sufficient size that permits continuously changing movement, just a few thousand yards "out of the way," can force an attacker in a small boat to show his intentions early. If the sea echelon area includes a small craft exclusion zone surrounded by a minimum speed zone, then a small craft directly approaching an ESG vessel at high speed can be designated hostile in enough time to engage the threat. In any event, distance and time afford the ESG multiple opportunities to develop and maintain a common operating picture for mutual support.

Active patrolling by RHIBs, LCACs, and helicopters assigned to the ESG coupled with alert, aggressive, shipboard lookouts are crucial to an effective perimeter defense. A strong case can be made that trained personnel are the best sensors for early, accurate, detection and classification of the small boat threat, particularly if the ESG will remain in the area for some time. Providing lookouts and boat crews with the pictorial database from the JIC of small craft operating in the area will improve the speed and accuracy of their efforts. Likewise, aircrews in the SH-60B can provide visual insight into area activities as well as operate their radar to rapidly cover large areas for search, detection, and identification of surface threats. Armed with air to surface missiles and guns, these aircraft can also be very effective against small boat attacks.

Should a surface combatant join the enemy's order of battle and not be destroyed in port, their size, speed, and the surrounding clutter of geography and traffic can make long range detection difficult. The dispersed force of ESG surface and air platforms networked together offers unique response capabilities once enemy vessels are under way. The cruiser (CG), guided missile destroyer (DDG), destroyer (DD) or frigate (FFG), working in concert with embarked SH-60B helicopters extend the surface search radar horizon of the area around the ESG. By providing an active radar search for precise close-in defense against combatant craft at sea, the SH-60B utilizing Hawk Link and associated tactics can supply a significant addition to the defense of the ESG. As discussed in Chapter 4, the SH-60B may be used for supporting deep operations or a close battle. If these helicopters cannot be pulled back to support an emerging maritime mission, consideration should be given to employing Air Combat Element (ACE) aircraft not involved in the raid to the extent possible (keeping in mind aircraft capabilities and crew training). If support needs grow beyond ESG capabilities, the Navy should be well positioned to coordinate outside support for maritime operations (i.e., surface combat air patrol (SUCAP) aircraft to respond to surface threats and maritime patrol aircraft (MPA) with imaging radar and electro-optic surveillance equipment for contact identification).

5.5 AIR OPERATIONS

In the rear area, air operations will be focused on airspace coordination, air defense, and support to other missions such as maritime operations and logistics. In terms of airspace coordination, the Navy can support the operation by coordinating the non-organic air defense assets and ensuring safety measures such as return to force (RTF) procedures are followed. Keeping in mind the tradeoffs with potentially supporting deep operations, the ships of the ESG provide a robust air defense capability in the rear area. While Navy air support to other missions in the rear area is a well-understood mission, the use of Navy helicopters in support of the raid force in the deep area may suggest a need to use non-raid ACE assets to support these missions (as noted in the previous section). When rear area requirements stretch beyond the ESG's capabilities, the Navy should be prepared to help coordinate non-organic support for functions such as airborne early warning and CAP.

Although already mentioned, airspace coordination in the rear area warrants some additional discussion. Chapter 4's discussion of airspace coordination hinted at the need to link airspace control measures set up for deep operations to those in the rear area. Chapter 4 suggests setting up a directional flow for aircraft in the deep area, and this directional flow needs to be connected to the rear area where a "best practice" is to use varying RTF routes to avoid predictability. Likewise, rear area air operations that are often considered "routine" (i.e., logistics runs and functional check flights) should be required to adhere to the established RTF plans, as are returning raid aircraft. Means for identifying friendly aircraft should include other factors beyond RTF, such as Mode I, II, III, and IV checks, expected flight profiles, and voice calls among many others.

Note

Reconstruction of many friendly fire incidents have shown fixation on single piece of negative data, while ignoring multiple pieces of confirming information, as the cause for the incident.

Again PPRs for identifying hostile aircraft should account for the multiple methods of identification available. Lastly, when operating in an established theater, all ESG air operations should be tied into the theater Air Tasking Order (ATO), as discussed in earlier chapters, and rear area flights are no exception. Putting these flights on the ATO will help protect these aircraft from friendly fire as they may cross the areas of influence of nearby forces.

5.6 LOGISTICS

There are two major issues that must be dealt with regarding logistics during rear area operations. The first, which is true of all logistics support and not just for long range raids, is the ability of an enemy to use logistics transfers of passengers, mail, cargo (PMC) or fuel as a vector for asymmetrical attack. This issue exists for both airborne and surface lift logistics and is exacerbated by the potential need to leave assets ashore overnight and the use of commercial logistics support in established theaters. One means to lessen this threat would be to incorporate additional screening procedures at pick up locations. The second issue deals with the logistics interface within an established theater. There is usually a Joint Force Commander Agent (JFCA) responsible for theater-wide logistics. Note that this term is generic and denotes any joint validating agency, including the Joint Movement Center, the Airlift Requirements Center in the European Command, the Joint Movements Management Office in the Pacific Command, and the Combined Transportation Management Center in Korea. Often times, the helicopter assets and control capabilities of the ESG will prompt the Joint Force Commander to name the ESG as the executive agent for logistics or task it to serve as the Helicopter Element Coordinator (HEC) for helicopter operations with the ability to task the logistic assets non-organic to the ESG. The demands of managing this role while trying to conduct a long range raid should be considered to allow for a shift of these responsibilities, if necessary.

CHAPTER 6

TACMEMO Evaluation Plan

6.1 INTRODUCTION

The Tactical Development and Evaluation (TAC D&E) process requires fleet feedback in order to make an assessment of the applicability and effectiveness of the tactics, techniques and procedures (TTPs) presented in this tactical memorandum (TACMEMO). Ideally, it should be evaluated within two years of promulgation and either cancelled or incorporated into appropriate Naval Warfare Publications (NWPs). However, due to increasing requirements and decreasing resources, it has become increasingly difficult for fleet units to conduct effective TACMEMO evaluations and validations within the prescribed two-year period, and an extension can be directed. In such cases, portions of the TACMEMO may be identified for inclusion into an NWP, while other portions may be deemed to require additional evaluation or be recommended for cancellation. Any requirement to extend the evaluation period will be provided by separate correspondence.

6.2 OBJECTIVE

The objective of this chapter is to provide guidance on developing and executing a TACMEMO evaluation plan in terms of resources, requirements, and constraints, and to provide specific guidance for reporting evaluation results. This evaluation process does not identify dedicated evaluation periods or assets, and should be conducted on an ongoing, not-to-interfere basis during scheduled fleet exercises and operations. Fleet feedback will be extremely valuable in assisting the originator/primary review authority in making final recommendations for accepting or rejecting the tactics contained in this TACMEMO.

6.3 TRANSITION PROCESS

The TTPs presented in this TACMEMO, once validated, are intended for inclusion in the appropriate NWPs, training publications, and unit level standard operating procedures (SOPs). The ensuing paragraphs discuss the evaluation process to support achieving such a determination.

6.4 EVALUATION PROCESS

The TACMEMO evaluation process invites both formal and unsolicited evaluation inputs to validate the nominated TTPs. Procedures for completing the evaluation and submitting comments are provided herewith.

6.4.1 Formal Evaluation

Commander Amphibious Group TWO (COMPHIBGRU TWO or CPG-2) will schedule formal evaluation of this TACMEMO to ensure its timely validation. Commands nominated to participate in this validation effort should submit evaluation comments to COMPHIBGRU TWO via their chain of command per the guidance of paragraph 6.6. Participants will use the following general guidance in developing their test plan.

6.4.1.1 Evaluation Plan

The evaluation plan shall identify the assets utilized to support the test, time period, data collection information, and subjective evaluation of the questions that constitute the evaluation plan. The TACMEMO is identified as CPG-2 TACMEMO 3-02.1.1-04, *Expeditionary Strike Group Support To Long Range Raids*.

6.4.1.2 Evaluation Ship/Staff(s)

Evaluation shall be completed by the following ships and staffs: COMPHIBGRU staffs, Expeditionary Strike Group (ESG) staffs, amphibious squadron (PHIBRON) staffs, Marine Expeditionary Unit (Special Operations Capable) (MEU(SOC)) staffs, Tactical Air Control Squadron staffs, Expeditionary Warfare Training Group staffs, and ships as assigned.

6.4.1.2.1 Assets Required

Assets required to complete the evaluation shall be those that are assigned to any ESG amphibious exercise or operation conducted by COMPHIBGRU or ESG staffs, supported by ESG ships, aircraft and personnel.

6.4.1.2.2 Geographic Restrictions

There are no geographic restrictions. However, data gathered on or in the littorals during ESG support to a long range raid or during major training evolutions is preferred.

6.4.1.3 Evaluation Results

Once data on the TACMEMO has been collected, evaluated, and validated, the results should be submitted to COMPHIBGRU TWO as an evaluation report using the format and the addresses and procedures discussed in paragraph 6.6.

6.4.2 Unsolicited Evaluation

Unsolicited evaluations may be submitted using letter, telephone or electronic messaging at any time via the chain of command to: Commander, Amphibious Group TWO, 2600 Tarawa Ct, Norfolk, VA 23521, (757) 462-7403 or via SIPRNET/NIPRNET; paragraph 6.5.3 refers.

6.5 EVALUATION REPORT

While determining the results of the TACMEMO evaluation, consulting the TACMEMO Evaluation Decision Tree in Figure 6-1 should be helpful in working through the thought process and for reaching a final recommendation. Evaluation feedback may be via Naval message, e-mail (NIPRNET or SIPRNET), or letter. Evaluation Reports should be based upon the answers to the questions presented in Appendix F and those in the following paragraphs. When possible, data sheets and questionnaires should be forwarded with any reports.

6.5.1 Subjective Evaluation

The questions provided in Appendix F represent a starting point for subjectively evaluating this TACMEMO. The list in the appendix is by no means exhaustive, so additional questions may be inserted by evaluating commands or provided as part of an overall assessment.

6.5.2 Objective Evaluation

The test objectives and structure contained herein are based on key Naval Tactical Tasks (NTAs), elements of the Naval Tactical Task List (NTTL) derived from the Naval Mission Essential Task List (NMETL), that establish the basis of naval capabilities. Evaluators should consider the following additional information when assessing the effectiveness of this TACMEMO, as these NTAs are benchmark measures and standards by which to gauge the TTPs developed in earlier chapters.

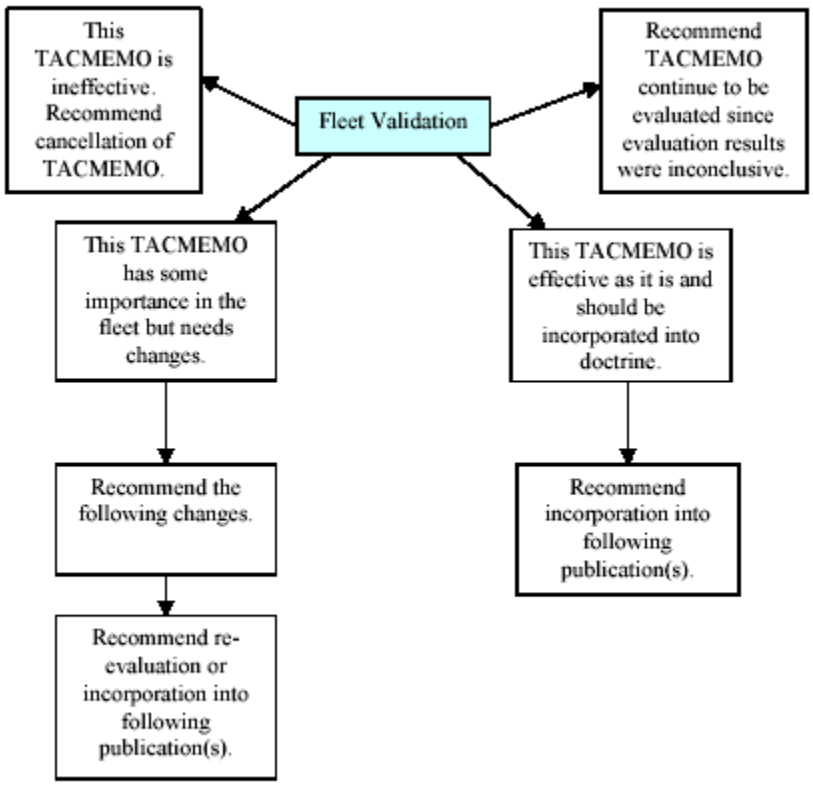

Figure 6-1 TACMEMO Evaluation Decision Tree

6.5.2.1 ESG Planning and Operations in Support of Long Range Raids

This section contains a list of NTAs for evaluating the planning and operations aspects of the TTPs put forth in this TACMEMO. While currently appropriate, the list may not be exhaustive and may not conform to the list of NTAs used by the training community. Prior to testing the TACMEMO, the NTAs that can adequately be observed (i.e., those NTAs that contain measures that the proposed tests will satisfy) should be determined using this list as a starting point in conjunction with those NTAs used by the training community.

1. NTA 1.1.1 Prepare Forces for Movement
2. NTA 1.1.1.1 Identify Lift Requirements
3. NTA 1.1.2.3.3 Conduct Flight Operations
4. NTA 1.1.2.3.3.2 Launch Aircraft
5. NTA 1.1.2.3.5 Conduct Wet Well Operations
6. NTA 1.2.1 Establish Force Area Operations Coordination
7. NTA 1.2.1.1 Establish a Plan for Water Space Management
8. NTA 1.2.1.2 Conduct Air Space Management
9. NTA 1.2.1.3 Establish Amphibious Objective Area (AOA)
10. NTA 1.2.3 Conduct Hydrographic Surveys
11. NTA 1.2.8 Conduct Tactical Reconnaissance and Surveillance
12. NTA 1.2.8.2 Conduct Helicopter Landing Zone Reconnaissance
13. NTA 1.2.8.3 Conduct Airborne Reconnaissance and Surveillance
14. NTA 1.5.4 Conduct Amphibious Operations
15. NTA 1.5.5.1.5 Conduct Raid

16. NTA 1.5.5.4.5 Conduct Withdrawal
17. NTA 1.5.5.8.4 Control Tactical Movement
18. NTA 1.5.6 Conduct Naval Special Warfare
19. NTA 2.1.3 Conduct Collection Planning and Directing
20. NTA 2.1.6 Allocate Intelligence Resources
21. NTA 2.2.2 Collect Tactical Intelligence on Situation
22. NTA 2.2.3.2 Perform Tactical Reconnaissance
23. NTA 2.4.4.4 Evaluate the Threat
24. NTA 2.4.4.5 Determine the Enemy's Courses of Action
25. NTA 2.4.5.5 Provide Intelligence Support to Targeting
26. NTA 2.5.2 Establish Secure and Rapid Dissemination Means
27. NTA 3.1 Process Targets
28. NTA 3.1.3 Select Platform(s) and System(s) for Attack
29. NTA 3.2.2 Attack Enemy Land Targets
30. NTA 4.2.1.1 Schedule/Coordinate Refueling
31. NTA 4.2.1.2 Conduct Aerial Refueling
32. NTA 4.2.2 Move Bulk Fuel
33. NTA 5.3 Determine and Plan Actions and Operations
34. NTA 5.3.1 Develop Concept of Operations
35. NTA 5.3.1.1 Define the Mission
36. NTA 5.3.1.2 Provide Concept of Operations
37. NTA 5.3.1.3 Develop Requirements and Priorities
38. NTA 5.3.2 Issue Planning Guidance
39. NTA 5.3.3 Develop Courses of Action
40. NTA 5.3.4 Analyze and Compare Courses of Action
41. NTA 5.3.9.2 Develop Contingent Responses
42. NTA 5.3.9.3 Plan Tactical Operations.

6.5.2.2 ESG Command and Control in Support of Long Range Raids

This section contains a list of NTAs for evaluating the command and control aspects of the TTPs from this TACMEMO. As with the previous section, the list may not be exhaustive and should be compared to the currently accepted NTA list used by the training community.

1. NTA 1.2.1.5 Determine Command Relationships for the Force
2. NTA 1.5.1 Control or Dominate the Area through Employment of Combat Systems
3. NTA 1.5.4.1.1 Deploy Coordinated Strike Forces from Sea-Based Vessels
4. NTA 3.2.8 Conduct Fire Support
5. NTA 3.2.8.1 Organize Fire Support Assets
6. NTA 3.2.10 Integrate Tactical Fires
7. NTA 5.1 Acquire/Analyze/Communicate and Maintain Status
8. NTA 5.1.1 Communicate Information
9. NTA 5.1.1.1 Transmit and Receive Tactical Information
10. NTA 5.1.1.1.1 Maintain Data link/Inter-Unit Communications
11. NTA 5.1.1.1.2 Provide Communications for Own Unit
12. NTA 5.1.1.1.3 Relay Communications
13. NTA 5.1.1.2 Receive and Transmit Force Orders
14. NTA 5.1.2 Manage Means of Communicating Information
15. NTA 5.1.2.1 Control Communication Nets
16. NTA 5.1.3.1 Maintain and Display Tactical Picture
17. NTA 5.2.1.1 Review and Evaluate Situation
18. NTA 5.2.1.2 Review and Evaluate Mission Guidance

19. NTA 5.2.1.3 Review Rules of Engagement (ROE)
20. NTA 5.2.2 Decide on Need for Action or Change
21. NTA 5.4 Direct, Lead and Coordinate Forces
22. NTA 5.4.1 Direct Forces
23. NTA 5.4.1.2 Exercise Tactical Command and Control
24. NTA 5.4.3 Synchronize Tactical Ops/Integrate Maneuver with Firepower
25. NTA 5.4.3.2 Develop Fire Support Measures
26. NTA 5.4.4 Establish Liaisons
27. NTA 5.5 Conduct Information Warfare (IW)
28. NTA 6.1.2.1 Employ Operations Security
29. NTA 6.1.2.2 Conduct Deception in Support of Tactical Operations
30. NTA 6.3.1 Protect and Secure Area of Operations.

6.5.2.3 Measures Of Effectiveness

A Measure of Effectiveness (MOE) is a parameter that evaluates the capability of the system or process to accomplish its assigned mission under a given set of conditions. The following questions are intended as MOEs for the *ESG Support to the Long Range Raid* TACMEMO, to be evaluated on a scale from 0 to 5 where 0 represents "not at all" and 5 represents "a great deal."

To what extent does the *ESG Support to the Long Range Raid* TACMEMO provide:

1. A better understanding of the role of the ESG capabilities in support of the long range raid?

2. An improved understanding and integration of ESG organic capabilities towards the effectiveness of long range raid planning?

3. A better understanding of the ESG organic and non-organic support available to the long range raid?

4. An improved understanding of how to incorporate these capabilities?

5. A better understanding of the needs and requirements of adjacent and higher command authority?

6. An improved capability to measure risk in formulating Go/No-Go criteria?

7. A catalyst for future and innovative tactical development?

8. Comprehension by non-organic assets of ESG capabilities, in the support of long range raids?

6.5.2.4 Measures Of Performance

A Measure of Performance (MOP) is a parameter that evaluates systems or process capabilities or characteristics under a given set of conditions (i.e., task level). The following questions are intended as MOPs for the *ESG Support to the Long Range Raid* TACMEMO. On a scale from 0 to 5 where 0 represents "not at all" and 5 represents "a great deal," to what extent are these tasks accomplished as a result of the *ESG Support to the Long Range Raid* TACMEMO:

1. Estimate as either a percentage or actual time, any reduction of time to complete the raid planning process that resulted from the *ESG Support to the Long Range Raid* TACMEMO?

2. Reduction of raid planning complexity?

3. Ease of producing templates and preplanned packages?

4. Improvements to existing standardized planning products?

5. Understanding of ESG ship positioning in multi-mission events?

6. Ability to achieve a coordinated launch sequence plan?

7. Ability to optimize deck movements, elevator runs, and pre-positioning of support personnel?

8. Effective incorporation of SH-60B and MH-60S capabilities into long range raid support?

9. Effective incorporation of Guided Missile Cruiser capabilities into long range raid support?

10. Effective incorporation of Destroyer and Guided Missile Destroyer capabilities into long range raid support?

11. Effective incorporation of Frigate capabilities into long range raid support?

12. Effective incorporation of LOS ANGELES Class Nuclear Submarine capabilities into long range raid support?

13. Effective incorporation of SEA WOLF Class Nuclear Submarine capabilities into long range raid support?

6.5.3 Report Address

The following address information is provided:

1. Naval message: COMPHIBGRU TWO NORFOLK VA//N01CNA//
2. NIPRNET: barry.reed.ctr@navy.mil
3. SIPRNET: reedb@phibgru2.navy.smil.mil
4. Letter: COMPHIBGRU TWO
   2600 Tarawa Ct,
   Norfolk, VA 23521
5. Phone: Commercial (757) 462-7403
6. Phone: DSN 253-7403.

6.6 EVALUATION FORMAT/CONTENT

Submit the TACMEMO evaluation report in the following format and with the content requested.
From:
To: COMPHIBGRU TWO NORFOLK VA//N01CNA//
Subj: (TACMEMO 03-02.1.1-04), EXPEDITIONARY STRIKE GROUP SUPPORT TO LONG RANGE RAIDS

1. Evaluation recommendations/comments of subject TACMEMO are provided below:
   a. TACMEMO Number: CPG-2 TACMEMO 3-02.1.1-04
   b. TACMEMO Title: “Expeditionary Strike Group Support to Long Range Raids”
   c. Recommendation: (Provide one of the following specific recommendations for disposition of subject TACMEMO)
      (1) Cancel TACMEMO (Provide rationale in paragraph 1 Amplifying Comments)
      (2) Continue TACMEMO evaluation (Provide reasons for recommendation to continue evaluation in paragraph 1 Amplifying Comments)

(3) Incorporate following changes in TACMEMO and retain for further evaluation (Provide specific change recommendations in paragraph 1 Amplifying Comments)
(4) Incorporate following changes in TACMEMO and incorporate into NWP (Provide specific change recommendations in paragraph 1 Amplifying Comments)
(5) Incorporate into doctrine (Identify specific publication in paragraph 1 Amplifying Comments)

d. Paragraph 1 Amplifying Comments:
(1) If recommendation (1) above (i.e., Cancel TACMEMO), explain rationale for cancellation recommendation: e.g., tactics ineffective, threat has changed/no longer exists, systems/software affected by TACMEMO are no longer in use.
(2) If recommendation (2) above (i.e., Continue evaluation), explain why: e.g., results of evaluation were inconclusive but TACMEMO is believed to have merit, unable to conduct evaluation, insufficient data to offer recommendation.
(3) If recommendations (3) or (4) above (i.e., make changes to TACMEMO and either re-evaluate or incorporate into doctrine), delineate specific change recommendations by individual paragraph number within TACMEMO.
(4) If the recommendation is to incorporate the TACMEMO into doctrine, identify applicable publication by title and number. When possible, identify specific chapters/sections of applicable publication in which the TACMEMO should be incorporated.

2. Provide command/unit point of contact information:
a. Point of Contact
b. SIPRNET Address
c. NIPRNET Address
d. Mailing Address
e. Commercial Phone Number
f. DSN Phone Number.

APPENDIX A

Expeditionary Strike Group Capabilities

A.1 EXISTING CAPABILITIES

As background for the discussions throughout this Tactical Memorandum (TACMEMO), this appendix provides a starting point for considering the key capabilities resident within the Expeditionary Strike Group (ESG). The data presented in the following tables should serve as a quick reference guide as planners initially consider options for supporting a long range raid. Tables A-1 and A-2 present overall ship and aircraft capabilities, including Marine aircraft to facilitate comparison to Navy aircraft capabilities, as well as approximate troop capacity, flight deck compatibility, armament, sensor types, and typical warfare roles. Tables A-3 and A-4 list the communications and networking/linking capabilities of ESG ships and aircraft. While the tables presented here provide an overview of relevant information based on ship class and aircraft type, individual ships and aircraft that constitute an ESG may not be configured exactly the same, so actual assigned asset capabilities should be considered. A brief look at future capabilities that may become available to an ESG during the evaluation period of this TACMEMO is also provided.

A.2 FUTURE CAPBILITIES

This section briefly considers updates to current capabilities and future technologies that should enhance Navy support to long range raids. As with the aircraft above, we also include here planned improvements to some existing Marine systems as well as future Marine systems that will impact long range raids, since that in turn may influence Navy support of the raid. These technologies are either in operational or developmental test or are already in the process of being incorporated into the ESG. As noted above, planners should not overlook actually assigned assets when considering support to long range raids.

A.2.1 Maritime

The two major future maritime capabilities that may impact navy support to long range raids are the new LPD 17 class ships and the Littoral Combat Ship (LCS). Compared to current LPDs, the LPD 17 will provide improvements in command and control, communications, ship self-defense, and flight operations (with the ability to accommodate the MV-22 Osprey). The LCS is a new class of ships being desinged to support littoral warfare. These small, high speed ships carrying mission modules for defense against submarines, fast inshore attach craft, and mines could prove to be a significant aid to protecting the ESG ships during the conduct of a long range raid. Additionally, the ability to embark troops, launch surface craft, and handle helicopters may increase options for getting the raid ashore (much like the use of the CG and DDG discussed in the TACMEMO). Finally, the speed of the craft may allow for it to transit into the area if identified early enough in the planning process.

A.2.2 Aviation

A significant number of changes sit on the expeditionary aviation horizon. Essentially every airframe in the ESG's arsenal is planned for or has already begun being updated or replaced. On the Marine side, the AH-1s, UH-1s, CH-53Es, and Continental United States (CONUS) based KC-130s are planned for updates to improve their capabilities, while the MV-22 Osprey and the Joint Strike Fighter are being developed to replace the CH-46E and AV-8B, respectively. Likewise, the Navy has already begun replacing the search and rescue detachment helicopters with the new MH-60S to be followed by replacing the SH-60Bs with MH-60Rs. In

addition to improved capabilities once fielded, the overlapping transition periods for these aircraft changes may present special challenges (or opportunities) for Navy support to long range raids.

A.2.3 Landing Craft

The Expeditionary Fighting Vehicle (EFV) represents the main landing craft future capability improvement. With greatly improved sea going capability (including over-the-horizon operations and speed) and personnel and command variants, the EFV may provide additional options to the long range raid planners. For instance, the personnel variant may be able to support in the defense of ESG ships.

SHIP CLASS	TROOP CAPACITY	SURFACE CRAFT	WEAPONS	AIRCRAFT	SENSORS AND MISSIONS
LHA	~2000 Marines	All ESG Surface Craft (Some may not be able to transport LCAC)	2 RAM launchers 2 Phalanx CIWS 3 .50 cal machine guns 4 25 mm machine guns	All ESG Aircraft	Sensors provide air and surface self-defense, in addition to supporting ship-to-shore mission. Provide ESG command and control (C2) platform.
LHD .	~2000 Marines	All ESG Surface Craft	2 RAM launchers 2 NATO Sea Sparrow launchers 2-3 Phalanx CIWS 4 .50 cal machine guns 3-4 25 mm machine guns	All ESG Aircraft	Sensors provide air and surface self-defense, in addition to supporting ship-to-shore mission. Provide ESG C2 platform.
LPD	900 Marines	All ESG Surface Craft	2 Phalanx CIWS, 8 .50 cal machine guns 2 25 mm chain guns	All ESG Helos (CH-53E 50K weight limit)	Self-defense and ship-to-shore systems. May act as C2 platform for split-ESG operations.
LSD .	400 Marines	All ESG Surface Craft	2 Phalanx CIWS 6 .50 cal machine guns 2 25 mm chain guns RAM launcher	All ESG Helos (CH-53E single spot only)	Self-defense and ship-to-shore systems.

Figure A-1. Expeditionary Strike Group Ship Classifications and Capabilities

SHIP CLASS	TROOP CAPACITY	SURFACE CRAFT	WEAPONS	AIRCRAFT	SENSORS AND MISSIONS
CG-47	11 Troops (Based on SH-60B capacity, not ship.)	RHIBs	Mk-26 or Mk-41 Standard Missile (SM) TLAM Mk-46 Torpedo 2 Phalanx CIWS 2 5"/54 cal guns	All ESG helos except CH-53E	AEGIS system, radar, and sonar suite for AD, SUW, ASW, and ISR, operating either as an escort or independently.
DDG-51	11 Troops (Based on SH-60B capacity, not ship.)	RHIBs	SM Harpoon TLAM Mk-46 Torpedo 1-2 5"/54 cal guns 2 Phalanx CIWS	All ESG helos except CH-53E	AEGIS system, radar, and sonar suite for AD, SUW, ASW, and ISR, operating either as an escort or independently.
FFG-7	11 Troops (Based on SH-60B capacity, not ship.)	RHIBs	Mk-46 torpedoes Mk-75 76mm/ 62 cal gun 1 Phalanx CIWS	All ESG helos except CH-53E	Radar, and Sonar suite for AD and ASW, operating either as an escort or independently.
SSN-688	~10 Troops	Swimmer Delivery Vehicle	TLAM VLS (SSN-719 and later) Harpoon Mk-48 torpedoes	N/A	Sensor suites for ASW, SUW, ISR, SOF, and MIW
SSN-21	~10 Troops	Dry Dock Shelter Advanced SEAL Delivery System	TLAM Harpoon Mk-48 torpedoes	N/A	Sensor suites for ASW, SUW, ISR, SOF, and MIW

Figure A-1. Expeditionary Strike Group Ship Classifications and Capabilities (continued)

AIRCRAFT TYPE	MISSION	RANGE	SENSORS	ARMAMENT	TROOPS OR CARGO
SH-60B	SUW, ASW, SAR, Cargo Lift, and Special Warfare Support	450 NM	LAMPS Equipped with radar, ESM, GPS, acoustic sensing, and on-board mission and acoustic processors. Secure, dedicated, high-speed data link	2 7.62mm or .50 cal machine guns AGM-119 Penguin or AGM-114 Hellfire Mk 46 or Mk 50 torpedoes	~11 Troops or 2,600 pounds
MH-60S (SAR DET)	Vertical Replenishment, SAR	380 NM	Equipped with digital map, thermal imager, and electronic warfare self defense suite.	N/A	~20 troops or 10,000 pound lift
CH-46E	Assault Troop Transport and Cargo	132 NM	NVG Capable	2 XM-218. 50 cal machine guns	14-22 Troops or 5,000 pounds
CH-53E	Movement and vertical delivery of personnel, cargo and equipment	540 NM	NVG GPS, AN/ARC-210 radio HNVS ANVIS HUD	2 XM-218 .50 cal machine guns	Tactical Bulk Fuel Delivery System (TBFDS) or 32 Troops
AH-1W	Close air support, Convoy Escort, SCAR, Recon, RESCORT, OAS	250 NM	GPS, HSS, HUD, TSU, NTS, Laser Designator	20mm cannon, TOW, Hellfire, AIM-9/AGM-122, 2.75" Rockets, 5" rockets, LUU-2	N/A
UH-1N	Transport, battlefield command and control, fire support, search and rescue	172 NM	Specialized comms package ASC-26 nav thermal imaging system	M-240 7.62mm, GAU-16 .50 cal, GAU-17 7.62mm, or GAU-2B/A machine guns; 2.75" Rockets	N/A
AV-8B	Close air support Deep air support Armed reconnaissance Air interdiction	580 NM	APG-65 Radar Lightening II targeting POD NAVFLIR DMU ARBS with laser spot tracker	MK-82, MK-83 LDGP bombs; GBU-12, GBU-16 LGB; CBU-99 cluster munitions; AIM-65 Maverick or AIM-9 Sidewinder missiles	N/A
KC-130 (CONUS BASED)	In-flight refueling, rapid ground refueling, aerial delivery of troops and cargo	2875 NM cargo 1000 NM tanker	Defensive electronic and infrared countermeasures systems	N/A	Aerial or Ground Refueling, 2 Buddy Stores, 92 Troops

Figure A-2. Expeditionary Strike Group Aircraft Classifications and Capabilities

SHIP CLASS	HF	VHF	UHF	SATCOM SHF	NETWORKS AND LINKS
LHA/LHD	HFRG	VHF-FM SINCGARS, Bridge to Bridge, EPLRS	AN/WSC-3 LOS, DWTS	AN/WSC-6 (SHF), AN/WSC-8 (Challenge Athena III) AN/WSC-3 (UHF) DAMA INMARSAT. GBS EHF FOT	GCCS-M, TBMCS, ADNS, VIXS, TADIL A&J PCMDS S-TADIL A CEC (USS WASP)
LPD	URT-23	VHF-FM SINCGARS, Bridge to Bridge, EPLRS	AN/WSC-3 LOS, DWTS	AN/WSC-3 (UHF) DAMA INMARSAT WSC-6 SHF EHF FOT	GCCS-M, ADNS, JCMIS
LSD	URT-23	VHF-FM SINCGARS, Bridge to Bridge, EPLRS	AN/WSC-3 LOS, DWTS	AN/WSC-3 (UHF) DAMA INMARSAT WSC-6 SHF EHF FOT	ADNS, SSDS GCCS-M
CG-47	HFRG	VHF-FM, Bridge to Bridge	AN/WSC-3 LOS	AN/WSC-3 (UHF) DAMA INMARSAT WSC-6 SHF EHF FOT	GCCS-M, ADNS, TADIL A & J, CEC, S-TADIL A/J
DDG-51	HFRG	VHF-FM, Bridge to Bridge	AN/WSC-3 LOS	AN/WSC-3 (UHF) DAMA INMARSAT	GCCS-M, ADNS, TADIL A & J, S-TADIL A/J
FFG-7	URT-23	VHF-FM, Bridge to Bridge	AN/WSC-3 LOS	AN/WSC-3 (UHF) DAMA INMARSAT	GCCS-M, ADNS TADIL A
SSN-688	N/A	Bridge to Bridge	AN/WSC-3 LOS	AN/WSC-3 (UHF) DAMA INMARSAT	ADNS
SSN-21	N/A	Bridge to Bridge	AN/WSC-3 LOS	AN/WSC-3 (UHF) DAMA INMARSAT	ADNS

Figure A-3. Expeditionary Strike Group Ship Communications Capabilities

AIRCRAFT TYPE	HF	VHF	UHF
SH-60B	YES	VHF-FM	YES
MH-60S (SAR DET)	YES	VHF-FM	YES
CH-46E	YES	VHF-FM, SINGCARS	YES
CH-53E	YES	VHF-FM, SINGCARS	YES
AH-1W	NO	VHF-FM, SINGCARS	YES
UH-1N	NO	VHF-FM, SINGCARS	YES
AV-8B	NO	VHF-FM, SINGCARS	YES
KC-130 (CONUS BASED)	YES	VHF-FM, SINGCARS	YES

Figure A-4. Expeditionary Strike Group Aircraft Communications Capabilities

APPENDIX B

Expeditionary Strike Group Intelligence Capabilities

B.1 INTELLIGENCE CAPABILITIES

This appendix serves to provide background for the discussions throughout this Tactical Memorandum (TACMEMO) of Intelligence, Surveillance, and Reconnaissance (ISR) capabilities resident within the Expeditionary Strike Group (ESG) that support Intelligence Preparation of the Battlespace (IPB) in support of a long range raid. IPB is an ongoing process that requires focused collection requirements, providing constant refinement of the situation. The data presented in the tables should serve as a ready reference for identifying assets available to the ESG in a focused effort towards IPB in support of the long range raid. Table B-1 presents overall ESG ship and aircraft ISR capabilities, while Table B-2 lists some non-organic capabilities that may be available within the theater, which when requested by the Composite Warfare Commander (CWC) could provide extensive ISR support to the long range raid. While the tables presented provide an overview of relevant information based on ship class and aircraft type, individual ships and aircraft that constitute an ESG may not be configured exactly the same, so actual assigned asset capabilities should be considered.

SHIP CLASS OR AIRCRAFT	COLISEUM	JIC	SSES	OUTBOARD	ESM CAPABILITY
LHA	YES	YES			YES
LHD	YES	YES	YES		YES
LPD	YES	YES	YES		YES
LSD					YES
CG-47				YES	YES
DDG-51				YES	YES
FFG-7					YES
SSN-688 CLASS					YES
SSN 21 CLASS					YES
SH-60B					YES

Figure B-1. Expeditionary Strike Group Organic Intelligence, Surveillance, and Reconnaissance Capabilities

MANNED AND UNMANNED AIRCRAFT	COMINT	ELINT	IMINT	EARLY WARNING RADAR	REAL TIME VIDEO
EP-3E ARIES	YES	YES	YES		YES
RC-135 RIVET JOINT	YES	YES			YES
E-3A SENTRY				YES	YES
RC-12 GUARDRAIL	YES	YES			
E-8C JSTARS			YES		YES
E-2C HAWKEYE		YES		YES	YES
P-3C ORION	SOME VERSIONS	YES	YES		YES
PIONEER			YES		YES
DRAGON FLY			YES		YES
GLOBAL HAWK	YES	YES	YES		YES

Figure B-2. Manned and unmanned non-organic Intelligence Surveillance and Reconnaissance assets available to an Expeditionary Strike Group

APPENDIX C

Command Structure

C.1 INTRODUCTION

This appendix is intended to provide readers of this Tactical Memorandum (TACMEMO) with a broad understanding of the chain of command under which an Expeditionary Strike Group (ESG) will operate, as well as to provide an introduction to the command and control process. It is a summation of the detail available in Joint Publication (JP) 0-2, *Unified Action Armed Forces (UNAAF)* and other Naval Warfare Publications that discuss command and control and naval operations. This appendix concludes with a list of questions designed to ensure raid planners have a clear understanding of the command relationships supporting their particular long range raid.

C.2 COMMAND RELATIONSHIPS AND RESPONSIBILITIES

Strong command relationships are essential to ensure an ESG-supported amphibious long range raid executes effectively, with a component of speed and surprise. Navy and Marine Corps personnel generally prepare for combat with different planning processes but are familiar with each other's processes and thus, are able to form a team to meet the challenge of planning complex tasks. They are task-organized to support Service, Joint and Combined operations and scaled to a particular mission. The team can act as an enabling force or serve as a central element in a joint task force where every organizational decision is a command and control decision. In the overarching view, this process establishes a network of command relationships that provides frameworks for building task forces and task groups. These frameworks can then define command relationships, control battle space, and manage tactical information. The chains of command and the command and support relationships identified within these frameworks establish authority and responsibility in an unbroken succession.

C.3 COMMAND AUTHORITY AND THE CHAIN OF COMMAND

Naval forces are organized in a way that clearly defines the structure of authority and responsibility. Command authority for naval forces, as with all United States (U.S.) military forces, originates with the President of the United States and extends through the Secretary of Defense, with advice from the Chairman of the Joint Chiefs of Staff, to the combatant commanders. A combatant command is a command with a broad, continuing mission under a single commander. It may be either a unified command, composed of forces of two or more Services, or a specified command, normally composed of forces from a single Service. The combatant commander will determine whether a Service component commander or a functional component commander will command and control the forces. A combatant command may have a geographic area of responsibility, referred to as a theater, or functional responsibilities, such as for special operations or space.

Combatant commanders typically organize their forces for specific warfighting tasks by forming a joint task force (JTF) under the command of the Joint Task Force Commander (JTFC). The JTFC will normally conduct operations to achieve objectives at the operational level of warfare. The Services provide forces to the JTF, whose commander organizes these forces into Service or functional components as the mission demands. A JTFC may also organize functional components when two or more Services operate in the same medium. A Special Operations component, typically called a Joint Special Operations Task Force (JSOTF) and a Joint Force Air Component Commander (JFACC) are two examples of functional components. For combat and operations other than war, combatant commanders normally employ assigned naval forces as part of a joint task force. Naval forces can be assigned to any of the combatant commanders for operations. The ESG commander may report to the theater commander during tasking involving an amphibious long range raid.

The four basic command relationships are combatant command (COCOM), operational control (OPCON), tactical control (TACON), and support. Only combatant commanders can exercise COCOM authority, and this authority cannot be delegated. OPCON is the authority to direct all aspects of military operations and joint training to accomplish assigned missions. OPCON is normally delegated to a JTFC, Service or functional component commander of a joint task force, or a naval expeditionary force commander. Tactical control is exercised by commanders at any echelon at or below the level of the combatant commander and involves local direction and control of movements or maneuvers for war fighting duties and responsibilities. A commander may establish various support relationships by directing one force to enter into a mutual, general, direct, or close relationship between commanders when one unit or organization can aid, protect, complement, or sustain the other force.

While the regional combatant commanders serve as the nation's executive authority for the use of military power in their assigned areas of responsibility, they must remain ever mindful of the assigned U. S. ambassadors who are personal representatives of the President. Because ambassadors, reporting through the Secretary of State, have full responsibility for implementation of U.S. foreign policy by any and all U.S. Government personnel within their country of assignment with the exception of those under military commands, coordination between combatant commanders with a regional military responsibility and ambassadors with a sovereign state-oriented diplomatic responsibility is critical.

C.4 ESG COMMAND AND CONTROL STRUCTURE

The ESG must have a definitive understanding of what forces are assigned and the command relationships, including for the assigned submarine and any special operations forces (SOF). The mission, forces assigned, and command relationships will generally be delineated in an initiating order, or they could be defined through a request for forces and delineated in the resulting deployment orders. When a support relationship is established, typically an establishing directive will supplement information not contained in the deployment and/or initiating orders. Amphibious operations conducted by the ESG will be built around the Support Relationship outlined in JP 0-2, *UNAAF* and JP 3-02, *Joint Doctrine for Amphibious Operations,* for actions between the amphibious squadron (PHIBRON) and the Marine Expeditionary Unit (Special Operations Capable) (MEU(SOC)) commanders. In a support relationship, which commander is supported is generally dependent upon the phase of the operation. The establishing authority will normally consider several factors when designating the supported commander at various phases and events during an amphibious operation including responsibility for the preponderance of the mission, force capabilities, threat, type, phase, and duration of the operation, command and control capabilities, battlespace assigned, and recommendations from subordinate commanders. For example, the PHIBRON commander may be the supported commander during typical underway operations, transits, or demonstrations, while the MEU(SOC) commander will be the supported commander during a raid.

Note:

The PHIBRON commander, MEU(SOC) commander and other commanders designated in the order initiating the amphibious operations, are coequal in planning.

C.5 COMMAND AND CONTROL

As both a process and a system, command and control (C2) provides insight; promotes an understanding of the enemy's capabilities, intentions, and vulnerabilities; and creates a vision of what needs to be done. C2 also identifies appropriate actions to attain goals, focuses and adapts efforts that create action among the various elements of the force, and serves to deny the enemy knowledge of our true intentions.

C2 is a continuous process by which a commander makes decisions and exercises authority over subordinate commanders in accomplishing an assigned mission. Each naval commander's decision and execution cycle or Observe Orient Decide Act (OODA) Loop has four sequential phases that are illustrated in Figure C-1. Although

it simplifies an extremely complex process, Figure C-1 shows how C2 enables a commander to have the ability to generate a rapid tempo of operations, allow for effective decision-making, and provide direction of military operations.

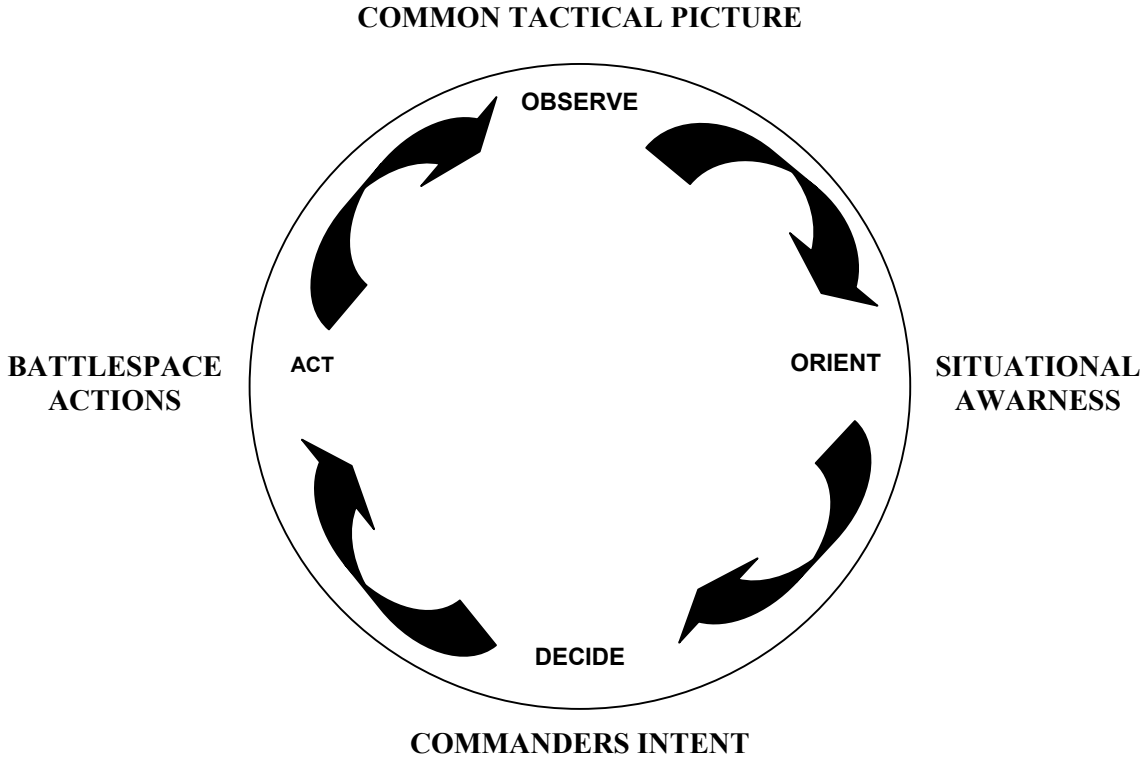

Figure C-1. Observe Orient Decide Act Loop

C.5.1 Methods of Control

Historically, commanders have used two methods of control: detailed (or centralized) control and mission (or decentralized) control. Although some operations may allow for detailed control (e.g., when time is not a critical factor, when procedures must be closely adhered to for safety reasons, or when restrictive rules of engagement demands close monitoring and extensive reporting of events), the pace, complexity, and dispersed nature of warfareusually demand that command be decentralized duringmission execution. The on-scene subordinates must be free to exercise initiative based on an understanding of the situation and knowledge of the commander's intent, which represents the unifying idea that is the commander’s vision of an operation. During execution, the situation may change, possibly making some assigned tasks obsolete, but the commander's intent is overarching and usually remains unchanged. The commander's intent is the primary way we decentralize execution, while maintaining unity of effort. The need for vertical informationflow of both status reports (upward) and orders (downward) does not work well in a rapidly changing situation or when the information flow is disrupted. Mission control emphasizes horizontal information flow between a commander’s subordinates. In practice, no commander will rely solely on either detailed or mission control. The type of control a commander uses will depend on the nature of the operation or task, the environment, the nature and capabilities of the enemy, and own force capabilities.

C.5.2 Command and Control Support

The principal objective of C2 support is to enhance the abilities of commanders to make and execute decisions, as well as to assist operations to counter enemy C2 capabilities. C2 support provides a framework that encompasses all personnel, systems, and resources throughout the naval force that support the flow and processing of information, including surveillance, reconnaissance, and target acquisition. It likewise supports information processing, intelligence, decision and display, communications, electronic warfare, cryptology, information operations and information warfare.

C.5.3 The Role of Information

As a component of the C2 system, information is the raw material of decision-making and execution. Information helps create an understanding of the situation as the basis for making a decision, and serves primarily to support the orient and decide phases of the OODA Loop and is essential to effective C2, yet any given piece of information may be meaningless by itself. Correlating and fusing pieces of information helps us gain knowledge and understanding by allowing us to form a mental image of the battlespace and to heighten and convey our understanding of the situation. In the end, this information is used to develop the concept of operations and the commander's intent; two essential parts of the overall plan that should convey to subordinates a clear mental image of the operation and the local situation and the desired outcome.

C.5.4 Command and Control Questionnaire

It is not possible within the scope of this TACMEMO to fully discuss all of the variations in command relationships that pertain to a long range raid. In general, however, the extreme cases will be that the raid is in part or whole the main effort of a theater campaign, which is heavily supported and tightly controlled by the Joint Force Commander, or is separated by space and time from the main effort of a theater, giving the ESG greater latitude and responsibility. Given the urgent nature of Special Operations Capable (SOC) missions, command relationships must frequently adapt to the new mission. The following questions can help define the command relationships in effect and improve planning, coordination, and execution. They are in no particular order, and for a given operation all or none may be crucial to success. Nor, is it likely, except in the extreme cases cited above that everyone's answers will be the same for each question. However, if agreement exists among all of the commanders and forces involved, the raid planners will have a clear understanding of the command relationships; and more importantly, how the raid will be supported.

1. Who is responsible for and what is the process for Fire Support Coordination? Who is the action addressee on a Fire Support Coordination Measures request message?

2. Who is responsible for and what is the process for Airspace Coordination? Who is the action addressee on an Airspace Control Measures Request (ACMREQ) message?

3. Who is responsible for and what is the process for Targeting? Where is the Joint Targeting Control Board (JTCB)? Who controls the Target and No Hit lists? Who is the action addresses on a Target Nomination (TGTNOM) message?

4. Who is responsible for and what is the process for scheduling and executing Air Operations? Who is the Joint Force Air Component Commander (JFACC)? Who generates the Air Tasking Order (ATO)? Who is the action addressee for an Air Support Request (AIRSUPREQ) message? Which units are responsible for preparing Allocation Request (ALLOREQ) messages, and who is the action addressee? Who has authority to re-roll sorties? Will the ESG receive any common use sorties? Will the ESG provide any common use sorties?

5. Who is responsible for and what are the processes for Air Defense C2? Who is the Area Air Defense Commander (AADC)? Are the ESG or any of its subordinate units assigned the roles of Regional Air Defense

Commander (RADC), Sector Air Defense Commander (SADC), or Control and Reporting Center? What is the impact of such tasking on the ESG capabilities to support a long range raid?

6. Who is responsible for and what is the process for coordinating Search and Rescue (SAR)? Is there a Joint Search and Rescue Control Center (JSRCC)?

7. Who is responsible for and what is the process for Medical Evacuation (MEDEVAC)?

8. Who is responsible for and what is the process for Logistics support? Is there a Joint Force Commander's Agent (JFCA) or other theater logistics coordinator assigned?

9. Who is responsible for and what is the process for Public Affairs and Visitor Control? Is there a Joint Visitor Control Bureau (JVCB)? Are there embedded media? What are the public affairs requirements for Combat Camera? What inter- and intra-theater lift will be required?

10. Who is responsible for and what are the processes for theater level intelligence? Is the Joint Intelligence Center (JIC) of the ESG subordinate to a theater JIC?

11. Who is responsible for and what are the processes for allied and coalition coordination? Are diplomatic clearances required? Who are they requested from and what is the lead time? Are other government agencies active in the area? What are the processes for coordination with them? Have No Fire Areas (NFAs) or other Fire Support Coordination Measures been established to protect them? What communications paths are available?

12. Who is responsible for and what is the process for coordinating with any Special Operations (SPECOPS) Command? Is there a Joint Special Operations Task Force (JSOTF) commander assigned? Are there any elements of SPECOPS forces down range? Have NFAs or other Fire Support Coordination Measures been established to protect them? What communications paths are available? In the event of planned or inadvertent contact, what are the link-up procedures?

This list of questions is by no means exhaustive. The dialogue should begin prior to chopping into theater. Discussions will likely intensify with the issuance of a warning order. Be prepared for processes to change in response toa mission, tactical situation, or threat. The right answers to these questions are the ones to which the theater commander and the ESG agree.

APPENDIX D

Go/No Go Criteria

D.1 INTRODUCTION

Central to a commander's direction to commence a long range raid, or any operation, is the establishment of a set of criteria that will determine if the assigned force can (i.e., "Go") or cannot (i.e., "No Go") complete the mission within the specified and implied goals. For the Navy and Marine Corps team of the Expeditionary Strike Group (ESG), the process to create the "Go/No Go" criteria is embedded within the rapid response planning process (R2P2). R2P2 planners, at a minimum, take into consideration the mission, forces available, threat, and the environment to produce a matrix of information that will be analyzed by the Marine Expeditionary Unit (Special Operations Capable) (MEU(SOC)) commander and other commanders. With such an objective in mind, this appendix provides a start point for the development of a list of key issues for consideration by Navy personnel to support planning for a long range raid.

D.2 CONSIDERATIONS FOR NAVY INPUT TO GO/NO GO CRITERIA

As noted at the outset of this document, the aim of this Tactical Memorandum (TACMEMO) has been to present a discussion on the Navy capabilities resident within an ESG to support and conduct a long range raid by the embarked MEU(SOC), including use of non-organic support when required and available. Therefore, if an issue identifies a clear requirement for a particular Navy capability from the ESG to ensure mission success, such support forms the basis for a Go/No Go criterion. Similarly, if an issue identifies a specific requirement for non-organic support, that item likewise forms the basis for another Go/No Go criterion. While this appendix focuses on Navy issues, it assumes that Navy participation in the planning process will provide an interface with MEU (SOC)-generated Go/No Go criteria, and thus, some MEU (SOC)-specific items that may impact Navy considerations are also presented. Finally, some of the issues below may not apply to every long range raid and other issues may be added as circumstances warrant. However, the success of planning and executing the operation will be dependent upon the level of dialogue within the ESG and the ability to be in accord as to the preparedness of the force to undertake the mission. While creativity and flexibility are encouraged, without an opportunity to practice some initiatives the results may be devastating.

1. Maritime Superiority: Can the ESG establish and maintain maritime superiority at the time(s) and place(s) required to support the long range raid? In order to develop the specific criteria, the ESG planners need to know the location, numbers, readiness, disposition, and intentions, to include most likely and most dangerous courses of action, for the following:
    a. Hostile or uncertain surface combatants
    b. Hostile or uncertain submarines
    c. Hostile or uncertain mine capabilities
    d. Hostile or uncertain coastal cruise missile systems
    e. Hostile or uncertain small boat attack capabilities
    f. Hostile or uncertain naval command, control, and communications systems
    g. Hostile or uncertain coastal intelligence, surveillance, and reconnaissance systems

2. Air Superiority: Can the ESG establish and maintain air superiority from the ESG to the raid site and back? In order to develop the specific criteria, the ESG planners need to know the location, numbers, readiness, disposition, and intentions, to include most likely and most dangerous courses of action, for the following:

    a. Hostile or uncertain counter air (strike) aircraft

b. Hostile or uncertain defensive counter air (fighter) aircraft
c. Hostile or uncertain early warning aircraft
d. Hostile or uncertain early warning radar systems
e. Hostile or uncertain ground controlled intercept (GCI) systems
f. Hostile or uncertain surface to air missile systems
g. Hostile or uncertain anti-aircraft artillery (AAA) systems
h. Hostile or uncertain man portable air defense systems (MANPADS)

3. Ship assignments: Are sufficient numbers of ESG units available to perform the following missions and how will the submarine be used in support of these mission areas?
    a. Air defense
    b. Maritime defense
    c. Command, control, and communications support
    d. Air operations support
        i. Flight deck spots required
        ii. Flight deck crews cross-trained and certified
        iii. Aviation support equipment, consumables, adapters, and ordnance support equipment in place
        iv. Launch sequence plans
    e. Advance force operations support
        i. Reconnaissance and Surveillance (R&S) team insertion
        ii. Forward command element (FCE) insertion.
    f. Intelligence, surveillance, and reconnaissance (ISR) support
        i. Sensor coverage
        ii. Common Operational Picture (COP)
        iii. Integration of collection capabilities with the Joint Intelligence Center (JIC)
        iv. Fulfillment of Commander's critical intelligence requirements (CCIRs)
        v. Evaluation, production, and dissemination of intelligence gathered at raid site, including Combat Camera products
    g. Logistics support
    h. Passengers, mail, cargo (PMC)
        ii. Public affairs and distinguished visitors
        iii. Medical support

4. What is the size of the raid force to be supported?

5. Command, control, and communications support: What level of support will be required for the raid force, including the number of various pieces of equipment required to conduct:
    a. Satellite communications
        i. Voice radios
        ii. Cellular telephones
    b. HF radio communications
        i. HF circuit guard ship
    c. VHF and UHF line of sight communications
        i. Airborne relay
        ii. Ship relay
    d. Execution checklists
    e. Information Management Standard Operating Procedure (SOP)

6. Air support for the raid: How many aircraft are available and will support:
    a. Lift for the raid force (i.e., assault support):
        i. CH-53E helicopters

   ii. SH-60B helicopters
b. AV-8B aircraft for close air support (CAS)
c. AH-1W aircraft for CAS
d. SH-60B aircraft for other tasks (i.e., may be multi-tasked)
   i. Navigation (i.e., pathfinder)
   ii. Command, control, and communications relay
   iii. Search and rescue (SAR)
   iv. Casualty evacuation (CASEVAC)
e. Non-organic aircraft required to support:
   i. Command, control, and communications relay
   ii. Airborne Early Warning (AEW)
   iii. CAP
   iv. CAS
   v. Intelligence, surveillance, and reconnaissance (ISR) aircraft

7. Fuel required for raid: What amount of fuel will be needed and how will it and other petroleum products get delivered?
   a. Total fuel required
   b. Lily pads required
   c. Expeditionary Airfields (EAs) required
      i. Intermediate Support Bases (ISBs)
      ii. Forward Operating Bases (FOBs)
      iii. Forward Arming and Refueling Points (FARPs)
   d. Ground based refueling operations
      i. Tactical Bulk Fuel Delivery System (TBFDS)
      ii. Aviation Refueling Capability (ARC)
   e. Non-organic tankers
      i. Marine KC-130R/T tankers, including Rapid Ground Refueling (RGR)
      ii. Air Force Special Operations MC-130E/H Combat Talon tankers

8. Air operations support: Can the ESG provide or produce each of the following:
   a. Allocation request (ALLOREQ) messages for non-organic air support
   b. Airspace control measures request (ACMREQ) messages for all air operations
      i. Low Level Transit Routes (LLTRs) for all helicopter operations
      ii. Minimum Risk Routes (MRRs) for all fixed wing, unmanned air vehicle, and Tomahawk operations
      iii. High Density Airspace Control Zone (HIDACZ) for control by raid force commander at raid site
      iv. Restricted Operating Zones (ROZs) for friendly forces not at raid site
      v. Coordinating Altitude (CA) to separate rotary and fixed wing flight operations

9. Fire support: Can the ESG produce or provide each of the following:
   a. Target Nominations (TGTNOMs) for all targets
   b. Tomahawk mission planning
      i. Pre-planned scheduled missions in support of the raid force
      ii. Pre-planned on-call missions in support of the raid force
   c. Strike aircraft mission planning
      i. Pre-planned scheduled missions in support of the raid force
      ii. Pre-planned on-call missions in support of the raid force
   d. CAS mission planning
      i. Pre-planned on-call missions in support of the raid force
      ii. Immediate on-call missions in support of the raid force

e. Naval Surface Fire Support (NSFS)
    i. Pre-planned scheduled missions in support of the raid force
    ii. Pre-planned on-call missions in support of the raid force
    iii. Immediate on-call missions in support of the raid force
f. No Fire Areas (NFAs) in support of all friendly forces on the ground
    i. Raid site
    ii. Reconnaissance and Surveillance (R&S) teams
    iii. EAs, including ISBs, FOBs and FARPs
    iv. Other coalition, allied, or special operations forces on the ground in the vicinity of the raid site
g. Free fire zones (kill boxes) overlaid on the battlespace
h. Cross boundary coordination procedures with other friendly land forces

10. Information operations support: How will each of the following be applied?
    a. Operational Security (OPSEC)
        i. Information Condition (INFOCON)
        ii. Encryption
        iii. Authentication procedures
        iv. Codewords
    b. Military Deception (MILDEC)
        i. Emissions Control (EMCON)
        ii. Deceptive lighting
        iii. Force disposition
        iv. Deception operations
    c. Electronic Warfare (EW)
        i. Ship Signals Exploitation Space (SSES)
        ii. Organizational Unit Tactical Baseline Operational Area Radio Detection (OUTBOARD) countermeasures exploitation system
        iii Super Rapid Blooming Off-board Chaff (SRBOC)
        iv SLQ-32

11. Implied mission support: What will be the Navy's role in supporting the following:
    a. SAR and tactical recovery of aircraft and personnel (TRAP)
    b. CASEVAC and Medical Evacuation (MEDEVAC)
    c. Reinforcements
        i. Sparrowhawk
        ii. Bald eagle

12. Enemy forces at the raid site: What are their location, numbers, readiness, disposition, and intentions, to include most likely and most dangerous courses of action?

13. Enemy reinforcements or uncertain forces with the potential to reinforce the raid site: What are their location, numbers, readiness, disposition, mobility, approach routes, and intentions, to include most likely and most dangerous courses of action?

APPENDIX E

Low, Slow Flier Considerations

E.1 INTRODUCTION

Tactics, techniques, and procedures (TTPs) for dealing with the threat of low, slow fliers by naval forces in the littoral are currently in development. Existing Naval Warfare Publications (NWPs), Navy Tactics, Techniques, and Procedures (NTTPs) and ship class tactical manuals provide a wealth of information particularly for the engagement of low, slow fliers by a single ship. This appendix provides additional considerations for protecting a naval force from low, slow fliers when operating in the littoral environment.

Low, slow fliers have three inherent disadvantages in attacking the Expeditionary Strike Group (ESG) and one advantage. The first disadvantage is that low, slow fliers generally do not possess stand off weapons, therefore they must overfly or pass close aboard naval vessels to present a threat. Secondly, by definition, low, slow fliers are not high performance aircraft, their slow speeds increase the reaction time available to the ESG and weapon system effectiveness. The third disadvantage is that due to lack of opportunities and cost low, slow flier pilots are not often highly trained, particularly for low altitude, overwater flight. The advantage of the low, slow flier is that it can appear to be normal general aviation traffic, making threat identification difficult. It must be remembered, there is no standard for a low, slow flier since the persons piloting these aircraft are on a suicide mission and the advantages and disadvantages could be accepted as a means to counter perceived patterns. For, in the end, the person completing the mission is driven by the quest to do a deed for which they feel they have been chosen to perform.

As a result, tactics to counter the low, slow flier involve keeping ESG operations separated from civil aviation operations as much as mission and geography permit and developing a series of escalating preplanned responses (PPRs) in accordance with the rules of engagement (ROE) that focus upon the limitations of the aircraft and pilot in order to discourage and ultimately prevent an attack.

E.2 AIRSPACE CONSIDERATIONS

To prevent mid-air collisions, the International Civil Aviation Organization (ICAO) and international treaties recognize a flight control zone from the surface to 2500 feet above ground level to a radius of 5 nautical miles around an air capable ship, under control of the ship's tower. This is identical to an airport traffic area around a controlled airfield. Safety of flight is reason enough to vigorously enforce this control zone, without considering a suicide attack by a low, slow flier.

To the extent that operations permit, stationing aviation capable ships away from civil aviation routes reduces the possibility of civil/military mid-air collisions and decreases the ability of an enemy to use civil air operations to mask a threat by light civil aircraft. While completely avoiding jet routes and visual flying rules (VFR) routes in the littoral is all but impossible, actions can be taken to reduce the impact of operating in the littorals. For example, when possible, ships should be stationed in such locations that will enable civil traffic using such routes to pass in the vicinity of the ESG at relatively high altitudes. Ultimately, navigation, fuel efficiency, traffic separation, and safety of flight keep the majority of civil aircraft within the published route structures. However, there are valid reasons (e.g. newscasters, fish spotting and recreational flying) for aircraft to fly outside the route structure. PPRs are necessary to deal with them.

E.3 CONSIDERATIONS FOR PREPLANNED RESPONSES

PPRs should be designed to achieve a rapid sort of benign aircraft from potential threats. If an aircraft appears to be headed for the ESG, voice calls on guard radio (121.5 MHz) will usually generate a response from most civil pilots. If repeated calls on guard are ignored and when time and sea echelon areas permit, ships may maneuver to see if the aircraft alters course to continue flying towards them.

Faced with an unidentified aircraft that refuses to respond on guard and continues to maneuver toward the ESG, the PPRs must allow for rapid escalation in accordance with the ROE to deter a threat or force it to demonstrate hostile intent as early as possible.

Deterrence should focus upon the likely low skill level of the pilot. Continued maneuvering, illumination with bright lights, conducting helicopter operations between the enemy aircraft and its intended target, and chaff firing significantly increase the difficulty of the attack for the enemy. If non-organic fixed-wing close air patrol (CAP) is available, a high-speed "thump," or a supersonic pass, may rattle the pilot or damage the aircraft sufficiently to abort the attack or cause it to fly into the water far short of the target. Likewise, having a large turboprop aircraft, e.g., a P-3 if available, join up and fly formation on the low, slow flier can also be very intimidating.

Planners should keep in mind that even the most basic single engine light aircraft enjoys a maximum speed advantage over helicopters. Stationed as pickets, some distance from the ships, helicopters provide a visual identification (VID) capability at range. However, using the, helicopter to engage the low, slow flier is generally ineffective. If the helicopter happens to be stationed on the threat axis, it will have one chance for a low probability "face shot" at the merge.

For a low, slow flier that does not abort the attack, five NM offers sufficient opportunities for ships to fire warning shots and commence engagements. As outfitted, ships should plan to engage such aircraft with Sea Sparrow missiles, rolling airframe missiles (RAM), Vulcan Phalanx weapon systems, and direct fire machine guns.

APPENDIX F

Proposed Data Collection Sheet

F.1 EVALUATION CRITERIA QUESTIONS

Observer's Name: _____ Rank/Rate: _____

Command: _____Location: _____

1. Does the TACMEMO assist in identifying and describing the capabilities unique to the Expeditionary Strike Group in support of the long range raid? _____

   Identify shortfalls, if any.

2. Does the TACMEMO assist in long range raid planning requirements? _____

   Identify problems, if any.

3. Does the TACMEMO assist in developing the process for Airspace and Fire Support Coordination in support of the long range raid? _____

   Identify problems, if any.

4. Does the TACMEMO provide adequate discussion of targeting processes? _____

   Identify problems, if any.

5. Does the TACMEMO provide adequate discussion on the ability of the Navy element of an ESG to support a long range raid of over 200NM? _____

   Identify shortfalls, if any.

6. Does the TACMEMO provide an adequate discussion of coordination issues with any Special Operations Command? _____

   Identify shortfalls, if any.

7. Does the TACMEMO assist in developing planning/scheduling supplements? _____

   Identify problems, if any.

8. Does the TACMEMO provide sufficient information to improve or enhance coordination between the various agencies involved in ESG command and control? _____

   Identify shortfalls, if any.

9. Does the TACMEMO assist in identifying what type of command relationship exists between Navy and MEU units of an ESG? _____

   Identify problems, if any.

10. Are supporting Cruiser/Destroyer (CRUDES) ships area/sector air defense capabilities taken into consideration? _____

    Identify problems, if any.

11. Does the TACMEMO assist in identifying how the SSN and embarked SEAL teams coordinate with the MEU raid element? _____

    Identify shortfalls, if any.

12. Does the TACMEMO address the Navy helicopters in an ESG and identify their capabilities to support a long range raid? _____

    Identify shortfalls, if any.

13. Does the TACMEMO assist in identifying what procedures are used to maintain track of friendly aircraft? _____

    Identify problems, if any.

14. Is this TACMEMO useful? _____

    Identify recommendations, additions, or cancellation reason.

15. What are the negative aspects of using this TACMEMO?

16. Are there alternative tactics that could be performed? _____

    Identify recommendation.

17. Additional comments:

APPENDIX G

Source Documents and References

G.1 ALLIED AND JOINT PUBLICATIONS

1. Joint Universal Lessons Learned System (JULLS).
2. Allied Joint Publication 3.1, *Allied Joint Maritime Operations, Apr 2004*
3. Allied Tactical Publication 8A, *Doctrine for Amphibious Operations*, *28 Feb 2002*
4. Joint Publication 1, *Joint Warfare of the Armed Forces of the United States10 Sept 2001*
5. Joint Publication 0-2, *Unified Action Armed Forces (UNAAF), 10 Jul 2001*
6. Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms, 12 Apr 2001*
7. Joint Publication 2-0, *Doctrine for Intelligence Support to Joint Operations, 9 Mar 2000*
8. Joint Publication 3-0, *Doctrine for Joint Operations, 10 Sept 2001*
9. Joint Publication 3-01, *Joint Doctrine for Countering Air and Missile Threats, 19 Oct 1999*
10. Joint Publication 3-02, *Joint Doctrine for Amphibious Operations, 19 Sept 2001*
11. Joint Publication 3-02.1, *Joint Doctrine for Landing Force Operations, 1 Nov 1989*
12. Joint Publication 3-04.1, *Joint Tactics, Techniques, and Procedures for Shipboard Helicopter Operations*, *10 Dec 1997*
13. Joint Publication 3-05, *Doctrine for Joint Special Operations, 17 Dec 2003*
14. Joint Publication 3-05.1, *Joint Tactics, Techniques, and Procedures for Joint Special Operations Task Force (JSOTF) Operations*, *19 Dec 2001*
15. Joint Publication 3-07, *Joint Doctrine for Military Operations Other Than War, 16 Jun 1995*
16. Joint Publication 3-09, *Doctrine for Joint Fire Support, 12 May 1998*
17. Joint Publication3-18, *Joint Doctrine for Forcible Entry Operations, 16 Jul 2001*
18. Joint Publication 3-52, *Doctrine for Joint Airspace Control in the Combat Zone, 22 Jul 1995*
19. Joint Publication 5-0, *Doctrine for Planning Joint Operations, 13 Apr 1995*
20. Joint Publication 5-00.2, *Joint Task Force Planning Guidance and Procedures, 13 Jan 1999*
21. Joint Publication 6-0, *Doctrine for Command, Control, Communications, and Computer (C4) Systems, Support to Joint Operations, 30 May 1995*

G.2 ARMY FIELD MANUALS

1. FM 1-112, *Attack Helicopter Operations, 16 Oct 2000*
2. FM 3-0, *Operations*., *2 Apr 1997*
3. FM 3-05.6, *Doctrine for Army Special Operations Aviation Forces, 14 Jun 2001*
4. FM 3-13, *Information Operations Doctrine, Tactics, Techniques, and Procedures, 28 Nov 2003*
5. FM 100-7, *Decisive Force: The Army in Theater Operations. 31 May 1995*
6. FM 100-17, *Mobilization, Deployment, Redeployment, Demobilization. 28 Oct 1992*

G.3 USN/USMC CONCEPT DOCUMENTS

1. *Naval Operating Concept for Joint Operations*, *22 Sept 2003*
2. Department of the Navy Transformation Roadmap *Power and Access…From the Sea*
3. CNO Guidance 2003: *Sea Power 21*
4. CNO Guidance *Forward . . . From the Sea: The Navy Operational Concept*.
5. Naval Amphibious Warfare Plan *Decisive Power Global Reach (2002)*
6. *Joint Vision 2020*
7. CNO Guidance *Navy's Global Concept of Operations*
8. United States Marine Corps *Concepts & Programs (2003)*

G.4 NAVY WARFARE PUBLICATIONS

1. Naval Doctrine Publication 1, *Naval Warfare*.
2. Naval Doctrine Publication 3, *Naval Operations*
3. Naval Warfare Publication 1-10.1, *Tactical Action Officer's Handbook.*
4. Naval Warfare Publication 1-10.11, *Tactical Action Officer's Handbook (Quick Ref Guide)*.
5. Naval Warfare Publication 3-01.12, *Surface Ship Antiair Warfare (AAW) Tactics.*
6. Naval Warfare Publication 3-01.10, *Antiair Warfare Commander's Manual.*
7. Naval Warfare Publication 3-02.1, *Ship-To-Shore Movement*
8. Naval Warfare Publication 3-02.14, *The Naval Beach Group.*
9. Naval Warfare Publication 3-02.22M, *MSC Support of Amphibious Operations*
10. Naval Warfare Publication 3-02.3, *Maritime Prepositioning Force (MPF) Operations*
11. Naval Warfare Publication 3-09, *Firepower In Support of Amphibious Operations.*
12. Naval Warfare Publication 3-09.11, *Supporting Arms in Amphibious Operations*.
13. Naval Warfare Publication 3-13, *Command and Control.*
14. Naval Warfare Publication 3-52, *Joint Doctrine for Joint Airspace Control in the Combat Zone.*
15. Naval Warfare Publication 3-56, *(Rev A), Composite Warfare Commander Manual*
16. Naval Warfare Publication 3-56.1, *Command and Control for Joint Air Operations.*

G.5 OPNAV INSTRUCTION

1. OPNAVINST 3500.38, *Universal Naval Task List.*

G.6 MARINE CORPS DOCTRINAL PUBLICATIONS

1. MCDP 1, *Warfighting*
2. MCDP 1-0, *Marine Corps Operations*
3. MCDP 1-3, *Tactics.*
4. MCDP 2, *Intelligence*
5. MCDP 3, *Expeditionary Operations.*
6. MCDP 5, *Planning.*
7. MCDP 6, *Command and Control.*

G.7 MARINE CORPS WARFIGHTING PUBLICATIONS

1. FMFM 1, *Warfighting*
2. FMFRP 2-12, *Marine Air-Ground Task Force: A Global Capability*
3. MCRP 5-1A, *Multi-service Tactics, Techniques, and Procedures for Joint Task Force Liaison Operations*
4. MCRP 3-31B, *Amphibious Ships and Landing Craft Data Book*
5. MCRP 3-11.1A, *Commanders Tactical Handbook*
6. MCRP 5-12D, *Organization of Marine Corps Forces*
7. MCWP 2-1, *Intelligence Operations*
8. MCWP 3-11.1, *Supporting Arms in Amphibious Operations.*
9. MCWP 3-13, *Employment of Assault Amphibious Vehicles*.
10. MCWP 3-22, *Antiair Warfare.*
11. MCWP 3-23, *Offensive Air Support*.
12. MCWP 3-25, *Control of Aircraft and Missiles.*
13. MCWP 3-25.1, *Integrated Combat Airspace Command and Control (ICAC2) Manual.*
14. MCWP 3-23.2, *Deep Air Support*
15. MCWP 3-25.3, *Marine Air Command and Control System Handbook.*
16. MCWP 3-25.4, *Marine Tactical Air Command Center Handbook.*

17. MCWP 3-25.5, *Direct Air Support Center Handbook.*
18. MCWP 3-25.7, *Tactical Air Operations Center Handbook.*
19. MCWP 3-25.10, *Low Altitude Air Defense Handbook*.
20. MCWP 3-31.1, *Supporting Arms In Amphibious Operations*
21. MCWP 3-36, *Army and Marine Corps Integration in Joint Operations*
22. MCWP 3-40.7, *Joint Force Land Component Commander Handbook (JFLCC)*
23. MCWP 3-41.1, *Rear Area Operations*
24. MCWP 3-42.1, *Unmanned Aerial Vehicle Operations*
25. MCWP 3-43.1, *Raid Operations*
26. MCWP 4-11.8, *Services in an Expeditionary Environment*
27. MCWP 5-1, *Marine Corps Planning Process*
28. MSTP Pamphlet 5-0.3, *MAGTF Planners Reference Manual*

G.8 TACTICAL MEMORANDUMS/NOTES

1. NTTP 3-02.14, (Rev A), *The Naval Beach Group*
2. NTTP 3-02.3M, *Maritime Prepositioning Force Operations*
3. NTTP 2-01.2, TMD IPB *Multiservice Tactics, Techniques, and Procedures for Theater Missile Defense Intelligence Preparation of the Battlespace*
4. TACMEMO 3-02.1-02 Expeditionary Strike Group (ESG) Operations

G.9 NAVY INSTRUCTIONS AND MARINE CORP STANDING OPERATING PROCEDURES

1. I Marine Expeditionary Force Order P5440.5A/ch1 *Standing Operating Procedures (SOP) For The Southern California (SOCAL) Deployed Marine Expeditionary Unit (MEU) Special Operations Capable (SOC), 1 Jun 1994*
2. 11th MEU *Rapid Response Planning Process Handbook,21 Oct 2003*
3. 15TH MEU *Rapid Response Planning Process Handbook, 5 Aug 2002*
4. Expeditionary Strike Group (ESG) Three *Staff Planning Procedures*
5. 13th MEU/PHIBRON-3 *Rapid Response Planning Process*
6. *Standing Operating Procedures For Third Marine Aircraft Wing (3d MAW) Units Deploying With The Southern California Marine Expeditionary Unit (Special Operations Capable), 29 Apr 2002*
7. Sparrow, Hawk and Bald Eagle Packages 11th MEU
8. Joint Task Force Commander's *Handbook for Peace Operations*

G.10 NAVY LESSONS LEARNED DATA BASE

1. LLWEO-04387, *CVBG Organic/Inorganic Air Support of the ARG (U).*
2. LLWEO-04842, *Communication Connectivity with LHD (U).*
3. LLWEO-04871, *ATO Reporting (U).*
4. LLEAO-04397, *ARG/Air wing Liaison Officers Essential for Coordination (U).*
5. LLEAO-04398, *Expanding Airspace Surrounding Amphibious Objective Area, Proved Beneficial (U).*

List of Acronyms/Abbreviations

A

A2C2	Army Airspace Command and Control
AAA	Anti-Aircraft Artillery
AACA	Area Airspace Coordination Authority
AAW	Anti-Air Warfare
ACE	Aviation Combat Element
ACM	Air Control Measures
ACMREQ	Airspace Control Measures Request
ACO	Airspace Control Order
AD	Air Defense
ADC	Air Defense Commander
ADCAP	Advanced Capabilities
ADNS	Automated Digital Network System
AEW	Airborne Early Warning (Navy E-2C)
AFATDS	Advanced Field Artillery Tactical Data System
AIRSUPREC	Air Support Request
ALLOREQ	Allocation Request Message
AMRAAM	Advanced Medium Range Air-To-Air Missile
ANVIS	Aviator Night Vision System
AO	Area of Operations
AOA	Amphibious Objective Area
AOI	Area of Interest
AOR	Area of Responsibility
ARBS	Angle Rate Bombing System
ARC	Aviation Refueling Capability
AREC	Air Resource Element Coordinator
ARG	Amphibious Ready Group
ARG/MEU	Amphibious Ready Group/Marine Expeditionary Unit
ASDS	Advanced SEAL Delivery System
ASW	Anti-Submarine Warfare
ASUW	Anti-Surface Warfare
ASWC	Anti-Submarine Warfare Commander
ATACMS	Army Tactical Advanced Conventional Munitions System
ATO	Air Tasking Order
AW	Air Warfare
AWACS	Airborne Warning and Control System

C

C2	Command and Control
CA	Coordinating Altitudes
CAP	Combat Air Patrol
CAS	Close Air Support
CASEVAC	Casualty Evacuation
CBU	Cluster Bomb Units
CCIR	Commanders Critical Information Requirement
CCOI	Critical Contact of Interest
COI	Contact of Interest

CEC	Cooperative Engagement Capability
CG	Guided Missile Cruiser
CIWS	Close In Weapons System
CNO	Computer Network Operations
CO	Commanding Officer
COA	Course of Action
COCOM	Combatant Commander
COLISEUM	Community Online Intelligence System for End Users and Managers
COMDTPUB	U.S. Coast Guard Commandant Publication
COMINT	Communications Intelligence
CONOPS	Concept of operations
CONUS	Continental United States
COP	Common Operational Picture
CRC	Cryptologic Resource Coordinator
CRUDES	Cruiser Destroyer
CSG	Carrier Strike Group
CWC	Composite Warfare Commander

D

DAMA	Demand Assigned Multiple Access
DD	Destroyer
DDG	Guided Missile Destroyer
DDS	Dry Deck Shelter
DF	Direction Finding
DIA	Defense Intelligence Agency
DMU	Digital Map Unit
DPICM	Dual Purpose Improved Convention Munitions
DTED	Digital Terrain Elevation Data
DWTS	Digital Wideband Transmission System

E

E	East
EA	Expeditionary Airfield or Electronic Warfare Attack
EFV	Expeditionary Fighting Vehicle
EHF	Extra High Frequency
ELINT	Electronic Intelligence
EMCON	Emissions Control
EP	Electronic Warfare Protection
ERGM	Extended Range Guided Munition
ES	Electronic Warfare Support
ESG	Expeditionary Strike Group
ESM	Electronic Support Measures
ESSM	Evolved Sea Sparrow Missiles
EW	Electronic Warfare

F

FARP	Forward Arming and Refueling Points

FCE	Forward Command Element
FFA	Free Fire Areas
FFCC	Force Fires Coordination Center
FFG	Frigate
FIAC	Fast Inshore Attack Craft
FISINT	Foreign Instrumentation Signals Intelligence
FLIR	Forward Looking Infrared
FM	Frequency Modulation
FMFM	Fleet Marine Force Manual
FOB	Forward Operating Base
FOTC	Force Over-The-Horizon Track Coordinator
FSCL	Fire Support Coordination Line
FSCC	Fire Support Coordination Center
FSCM	Fire Support Coordination Measures
FSE	Fire Support Element

G

GBS	Global Broadcast Service
GCCS-M	Global Command and Control System-Maritime
GCI	Ground Controlled Intercept
GPS	Global Positioning System

H

HEC	Helicopter Element Coordinator
HF	High Frequency
HIDACZ	High Density Air Control Zone
HIFR	Helicopter in Flight Refueling
HNCS	Helicopter Night Vision System
HUD	Heads Up Display
HUMINT	Human Intelligence

I

ICAO	International Civil Aviation Organization
IFF	Identification Friend-or-Foe
IMINT	Image Intelligence
INFOCON	Information Condition
INMARSAT	International Maritime Satellite Telephone System
IP	Internet Protocol
IPB	Intelligence Preparation of the Battlefield
IO	Information Operations
ISB	Intermediate Support Base
ISR	Intelligence, Surveillance, and Reconnaissance
IW	Information Warfare
IWC	Information Warfare Commander

J

JAC	Joint Analysis Center
JAG	Judge Advocate General

JAOC	Joint Air Operations Center
JCS	Joint Chiefs of Staff
JDAM	Joint Direct Attack Munition
JEZ	Joint Engagement Zone
JFACC	Joint Force Air Component Commander
JFC	Joint Force Commander
JFCA	Joint Force Commander Agent
JFFC	Joint Forces Fires Center
JFLCC	Joint Force Land Component Commander
JFMCC	Joint Force Maritime Component Commander
JIB	Joint Information Bureau
JIC	Joint Intelligence Center
JIPTL	Joint Integrated Prioritized Target List
JMCIS	Joint Maritime Command Information System
JP	Joint Publication
JSF	Joint Strike Fighter
JSOTF	Joint Special Operations Task Force
JSRC	Joint Search and Rescue Coordinator
JSRCC	Joint Search and Rescue Control Center
JSOW	Joint Stand off Weapon
JSTARS	Joint Surveillance Target Attack Radar System
JTCB	Joint Targeting Control Board
JTF	Joint Task Force
JTFC	Joint Task Force Commander
JVCB	Joint Visitor Control Board

K

Kts	Knots

L

LAC	Launch Area Coordinator
LAMPS	Light Airborne Multi-Purpose System
LCAC	Landing Craft, Air Cushioned
LCM	Landing Craft, Mechanized
LCPL	Landing Craft Personnel Large
LCS	Littoral Combat Ship
LCU	Landing Craft, Utility
LDGP	Laser Designated Guided Precision
LFOC	Landing Force Operations Center
LHA	Amphibious Assault Ship
LHA/LHD	Amphibious Assault Ships
LHA(R)	LHA Replacement
LHD	Amphibious Assault Ship (With Internal Dock)
LLTR	Low Level Transit Route
LNO	Liaison Naval Officer
LOS	Line of Sight
LPD	Amphibious Transport Dock Ship
LSD	Dock Landing Ship

M

MAGTF	Marine Air Ground Task Force
MANPAD	Man-Portable Air Defense
MASINT	Measurement and Signature Intelligence
MCDP	Marine Corps Doctrine Publication
MCWP	Marine Corps Warfare Publication
MEDEVAC	Medical Evacuation
MEU	Marine Expeditionary Unit
MEU(SOC)	Marine Expeditionary Unit (Special Operations Capable)
MEZ	Missile Engagement Zone
MIO/LIO	Maritime Interdiction Operations/Leadership Interdiction Operations
MIWC	Mine Warfare Commander
MILDEC	Military Deception
MOE	Measure of Effectiveness
MOP	Measure of Performance
MRR	Minimum Risk Route

N

NAVFLIR	Navigation Forward Looking Infrared
NFA	No Fire Area
NIPRNET	Non secure Internet Protocol Routing Network
NLLDB	Navy Lessons Learned Data Base
NMETL	Navy Mission Essential Task List
NM	Nautical Mile
NSFS	Naval Surface Fires Support
NTA	Naval Tactical Task
NTTL	Naval Tactical Task List
NTTP	Navy Tactics, Techniques and Procedures
NVD	Night Vision Devices
NVG	Night Vision Goggle
NWP	Naval Warfare Publication

O

OPCON	Operational Control
OPGEN	General Operations Order
OPSEC	Operations Security
OPTASK	Operational Task
OSINT	Open Source Intelligence
OTH	Over-The-Horizon
OUTBOARD	Organizational Unit Tactical Baseline Operational Area Radio Detection Countermeasures Exploitation System

P

PHIBGRU	Amphibious Group
PHIBRON	Amphibious Squadron
PIM	Position and Intended Movement
PIR	Priority Intelligence Requirements
PMC	Personnel, Mail, and Cargo

PPR	Preplanned Response
PR	Production Request
PSYOP	Psychological Operations
PWC	Principle Warfare Commander

R

R&S	Reconnaissance and Surveillance
R2P2	Rapid Response Planning Process
RACA	Regional Airspace Control Authority
RADC	Regional Air Defense Commander
RAM	Rolling Airframe Missile
RFI	Request for Information
RGR	Rapid Ground Refueling
RHIBs	Rigid Hull Inflatable Boats
ROE	Rules of Engagement
ROS	Rapid Obscuration System
RSRC	Regional Search and Rescue Coordinator
RT	Receiver-Transmitter

S

SACC	Supporting Arms Coordination Center
SADC	Sector Air Defense Commander
SAG	Missile-defense Surface Action Group
SAM	Surface to Air Missile
SAR	Search and Rescue
SATCOM	Satellite Communications
SC	Screen Commander
SCC	Sea Combat Commander
SDV	Swimmer Delivery Vehicle
SEAL	Sea Air Land
SG	Strike Group
SHF	Super High Frequency
SIGINT	Signals Intelligence
SINCGARS	Single Channel Ground and Airborne Radio System
SIPRNET	Secure Internet Protocol Routing Network
SM	Standard Missile
SOA	Speed of Approach
SOC	Special operations Capable
SOCA	Submarine Operations Controlling Authority
SOF	Special Operations Forces
SOP	Standing Operating Procedures
SPECOPS	Special Operations
SPINS	Special Instructions
SRBOC	Super Rapid Blooming Offboard Chaff
SSDS	Ship Self-Defense System
SSES	Ship Signal Exploitation Space
SSN	Submarine (Nuclear Powered)
STW	Strike Warfare
STWC	Strike Warfare Commander
SUW	Surface Warfare

SUWC	Surface Warfare Commander

T

TAC D&E	Tactical Development and Evaluation
TACC	Tactical Air Control Center
TACMEMO	Tactical Memorandum
TACON	Tactical Control
TACRON	Tactical Air Control Squadron
TADIL	Tactical Digital Information Link
TBFDS	Tactical Bulk Fuel Delivery System
TBMCS	Theater Battle Management Core System
TGTNOM	Target Nomination
TLAM	Tomahawk Land Attack Missile
TOA	Time of Arrival
TRAP	Tactical Recovery of Aircraft and Personnel
TST	Time Sensitive Target
TTP	Tactics, Techniques, and Procedures

U

U.S.	United States
UAV	Unmanned Aerial Vehicle
UHF	Ultra High Frequency
USMC	United States Marine Corps
USS	United States Ship
USW	Undersea Warfare

V

VFR	Visual Flight Rules
VID	Visual Identification
VLA	Vertically Launched Array
VLS	Vertical Launch System
VHF	Very High Frequency
VIXS	Video Information Exchange Subsystem
VMC	Visual Meteorological Conditions
VSTOL	Vertical Short Take-Off and/Landing

W

W	West