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14. ABSTRACT

Homeland Security is perhaps the toughest issue that America faces today. It encompasses almost every aspect of the American way of life. With the stakes so high, it is the major focus of a host of military and civilian agencies tasked with keeping America safe and secure. The U.S. Coast Guard, as the lead federal agency for Maritime Homeland Security (MHLS), is tasked with bolstering and ensuring the safety and security of one of America's most vulnerable terrorism targets—the Marine Transportation System and associated marine critical infrastructure. Since September 11, 2001, the Coast Guard has made great strides in securing America's Maritime Domain. They have developed Strategic Guidance, made progress in executing security programs as mandated by Congress, and spearheaded international efforts to set standards for port security. However, there is currently no official cohesive operational design for executing the MHLS mission.

To bridge this gap, the Coast Guard has drafted the Ports, Waterways, and Coastal Security Strategy Deployment Plan (PWCS). This plan is the basis for an overarching operational architecture to implement and achieve the Coast Guard's MHLS objectives, essentially, a plan to create an operational design for MHLS. This paper will distill from the draft document, what the MHLS operational plan is. A critical analysis will then show that the PWCS, while an excellent start to the development of an Operational Design, is in need of further revision in the areas of Desired End-State and overall Command and Control (C2) of the MHLS operation.

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**THE U.S. COAST GUARD'S PORTS, WATERWAYS AND COASTAL
SECURITY STRATEGY DEPLOYMENT PLAN: AN OPERATIONAL
DESIGN FOR MARITIME HOMELAND SECURITY**

By

**Martin L. Malloy
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A paper submitted to the faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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09 February 2004

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Abstract

Homeland Security is perhaps the toughest issue that America faces today. It encompasses almost every aspect of American way of life. With the stakes so high, it is the major focus of a host of military and civilian agencies tasked with keeping America safe and secure. The U.S. Coast Guard, as the lead federal agency for Maritime Homeland Security (MHLS), is tasked with bolstering and ensuring the safety and security of one of America's most vulnerable terrorism targets—the Marine Transportation System and associated marine critical infrastructure. Since September 11, 2001, the Coast Guard has made great strides in securing America's Maritime Domain. They have developed Strategic Guidance, made progress in executing security programs as mandated by Congress, and spearheaded international efforts to set standards for port security. However, there is currently no official cohesive operational design for executing the MHLS mission.

To bridge this gap, the Coast Guard has drafted the Ports, Waterways, and Coastal Security Strategy Deployment Plan (PWCS). This plan is the basis for an overarching operational architecture to implement and achieve the Coast Guard's MHLS objectives, essentially, a plan to create an operational design for MHLS. This paper will distill from the draft document, what the MHLS operational plan is. A critical analysis will then show that the PWCS, while an excellent start to the development of an Operational Design, is in need of further revision in the areas of Desired End-State and overall Command and Control (C2) of the MHLS operation.

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Introduction

The United States faces an incredibly daunting Maritime Homeland Security (MHLS) problem. Issues stem from the tension between the security resources available and the magnitude of the U.S. Marine Transportation System (MTS). The necessity of striking a fine balance of securing American maritime borders and associated marine transportation infrastructure without impeding the very commerce that makes America the hyper power that it is today further complicates the problem. Consisting of waterways, ports, associated intermodal connections and various system users, the U.S. MTS is critical to the nation's economic health and to its military sealift capability. The maritime environment in which U.S. jurisdiction, to include its MTS that supports 95% of U.S. overseas trade, applies is over 3.5 million square miles of ocean and 95,000 miles of coastline.ⁱ It was reported to Congress recently that, "Despite the importance of seaport security, perhaps no other mode of transportation is currently more vulnerable to future attacks than our nation's Marine Transportation System."ⁱⁱ

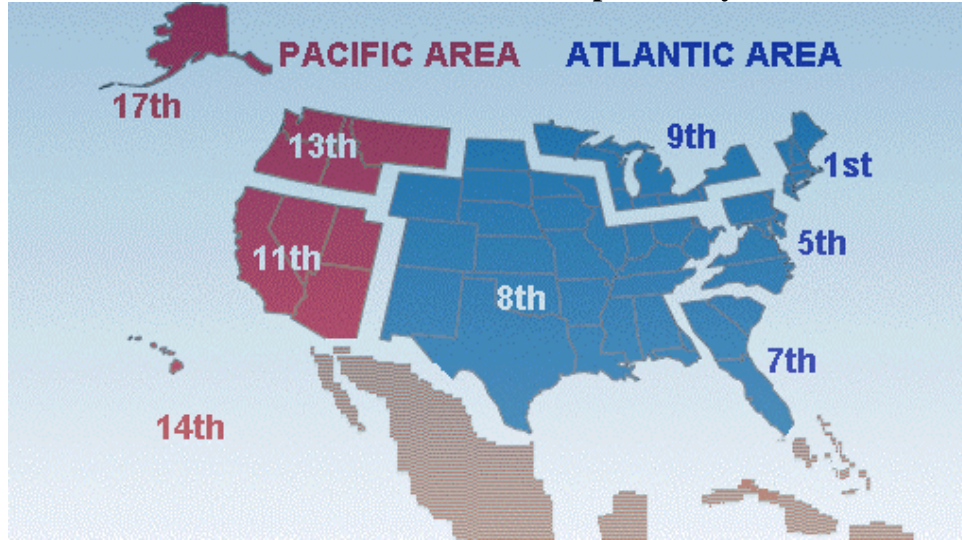
To address these vulnerabilities, the federal government assigned the U.S. Coast Guard through a series of documents, most notably the Homeland Security Act of 2002 (HLSA)ⁱⁱⁱ and the Maritime Transportation Security Act of 2002 (MTSA)^{iv}, as the lead federal agency (LFA) for MHLS. The Coast Guard developed strategic guidance and set strategic objectives in its cornerstone December 2002 MHLS document, *Maritime Strategy for Homeland Security*. It also made significant progress in executing programs as mandated by the MTSA, the legislation requiring sectors of the maritime industry to implement security measures designed to protect the MTS from terrorism attacks, and successfully implemented several associated initiatives. However, there is currently no official cohesive operational

design for executing the mission of MHLS.^v To bridge this gap, the Coast Guard Maritime Homeland Security Integration Team, a staff element of the Assistant Commandant for Operations, drafted the Ports, Waterways, and Coastal Security Strategy Deployment Plan (PWCS). This Plan is the basis for an overarching operational architecture to implement and achieve the Coast Guard's MHLS objectives, essentially, a plan to create an operational design for MHLS. This paper will distill from the draft document, the MHLS operational plan. Then, through the lens of Milan Vego's Operational Design Schematic model found in Operational Warfare,^{vi} it will show that the PWCS, while an excellent start to the development of an Operational Design, is inadequate and in need of further revision and definition in the areas of Desired End-State and overall Command and Control (C2) of the MHLS operation.

Background

The Coast Guard is a “. . . military, multi-mission, maritime service [that possesses] a unique blend of humanitarian, law enforcement, regulatory, diplomatic, and military capabilities.”^{vii} Unlike the other military services, the Coast Guard Commandant is the operational commander and the administrative chief. Operationally, the Coast Guard divides the waters of the United States into two geographic areas (Figure 1) and assigns geographic area commanders, the Atlantic Area Commander's (LANTAREA) and the Pacific Area Commander's (PACAREA). Historically, the operational level of C2 for the Area Commanders was for the most part limited to large cutters and fixed wing aircraft operating in the U.S. Exclusive Economic Zone (EEZ) or Caribbean.

Figure 1
LANTAREA and PACAREA Areas of Responsibility^{viii}



The Marine Safety community, especially, was virtually bereft of any operational level control. Until recently there were no Marine Safety staff elements on the Area staffs. Very little, if any, tasking or guidance, or requests for such, ever went through the Areas. The Assistant Commandant for Marine Safety and Environmental Protection served as both strategic and, to a certain extent, operational commander who set policy and standards that the tactical unit commanders executed as they saw fit.^{ix} This degree of autonomy was and still is reinforced by numerous authorities codified in U.S. law and regulation to the local Captain of the Port (COTP) / Officer in Charge of Marine Inspection (OCMI), the unit tactical commander. This tactical autonomy was culturally respected within the Coast Guard and allowed for variations of standards at different ports throughout the nation, often to the consternation of those under different COTP/OCMI authorities. This was the environment in which the Port Security mission re-emerged as one of two pre-eminent Coast Guard missions after the terrorist attacks of September 11th . . . under the authorities vested in the COTP, the tactical commander.

The Coast Guard's approach to MHLS was and still is an evolutionary process.^x Since September 11, 2001, the Coast Guard made headway in its MHLS mission through several initiatives. Most notable were the Maritime Domain Awareness (MDA) initiative (“a combination of intelligence, surveillance and operational information to build as complete a picture as possible to the threats and vulnerabilities in the maritime realm”^{xi}), outreach and partnering with other agencies and industry.^{xii} The Coast Guard also led an international initiative that culminated in the adoption of an international maritime security policy through the International Maritime Organization (IMO). By leading this initiative, the Coast Guard prevented the proliferation of independent national maritime security programs without standards that could have impeded commerce, “while at the same time ensured that meaningful security measures will be consistently implemented on a global scale.”^{xiii} The results were new amendments to the International Convention for Safety of Life at Sea (SOLAS) and the International Ship and Port Facility Code (ISPS). The United States adopted the standards and enacted the MTSA to comply with the new SOLAS security amendments; “. . . together they form the cornerstone of the nation's maritime homeland security strategy.”^{xiv} However, to the interested observer, an overall strategic theater architecture does not appear to exist, just a series of well meaning but disconnected security initiatives.

Ports, Waterways and Coastal Security (PWCS) Strategy Deployment Plan (DRAFT)

The Draft PWCS roughly provides the theater strategic architecture for MHLS. The PWCS is a plan for instituting MHLS and creating an environment in which preventative, interdictive, or response MHLS operations can be carried out with or without interagency participation. It spans the entire spectrum of Operational Art, from strategic through tactical

and appears to be the first effort to capture all aspects of the MHLS mission and put them into a cohesive architecture. The PWCS aligns itself with *The National Security Strategy of the United States of America* and the *National Strategy for Homeland Security* and incorporates the required actions contained in the MTSA and HLSA.^{xv} From these strategic objectives, the PWCS states eight Supporting Objectives,^{xvi} which also should be viewed as theater-strategic objectives.

Table 1 MHLS Strategic Objectives and PWCS Supporting Objectives

Maritime Strategy for Homeland Security Strategic Objectives (Bold) as supported by the Ports, Waterways and Coastal Security Strategy Deployment Plan Supporting Objectives
<p>Prevent terrorists attacks within, and terrorists exploitation of the U.S. Maritime Domain</p> <ul style="list-style-type: none"> • All potential terrorist attacks and terrorist exploitation within the U.S. Maritime Domain are detected. • Terrorist attacks and exploitation of the U. S. Maritime Domain are prevented through interdiction and other means.
<p>Reduce America’s vulnerability to terrorism within the U.S. Maritime Domain</p> <ul style="list-style-type: none"> • Vulnerabilities within the U.S. Maritime are identified, assessed, and reduced or eliminated.
<p>Protect U. S. population centers, critical infrastructure, maritime borders, ports, coastal approaches, and the boundaries and “seams” between them.</p> <ul style="list-style-type: none"> • Strategies to protect U.S. critical infrastructure, population centers, key assets within and adjacent to U.S. Maritime Domain are identified, assessed and implemented in accordance with national standards.
<p>Protect the U.S. Maritime Transportation System while preserving the freedom of the Maritime Domain for legitimate pursuits.</p> <ul style="list-style-type: none"> • The safety, security, functionality and integrity of the MTS are preserved through transparency of use from source to destination. • Legitimate users/uses of the MTS are identified and supported. Non-legitimate users are identified and their use of the MTS is denied.
<p>Minimize the damage of, and recover from, attacks that may occur within the Maritime Domain as either the Lead Federal Agency (LFA) or supporting agency.</p> <ul style="list-style-type: none"> • Damage and loss of life are minimized. • Functionality of the MTS is restored quickly.
<p style="text-align: center;"><i>Standards</i></p> <p>(Illustrative Example of Standard under last Supporting Objective)</p> <ul style="list-style-type: none"> • Restore Core MTS functionality within 24 hours of the event 90% of the time.

Source: U. S. Coast Guard, *Ports, Waterways, and Coastal Security (PWCS) Strategy Deployment Plan (DRAFT)*, (Washington, DC: 30 September), 22-24.

Under each of these theater-strategic objectives, the plan assigns quantitative standards that would identify the theater-strategic objectives as having been met. These standards could be identified as operational objectives in that their achievement could either significantly affect the success of the MHLS mission or individually they could be the sole objective of a specific operation.^{xvii}

The PWCS then proposes to achieve these objectives through the following Strategy Elements or categories of actions and initiatives that are also articulated in the *Maritime Strategy for Homeland Security*:

- Increase Maritime Domain Awareness
- Conduct Enhanced Maritime Security Operations
- Close Port Security Gaps
- Build Critical Security Capabilities
- Leverage Partnerships to Mitigate Security Risks
- Ensure Readiness for Homeland Defense Operations^{xviii}

Again, each broad category of action is broken into more specific “Major Initiatives” activities, which in turn are further subdivided into “Milestones” activities that would, when completed, conceptually achieve the Major Initiative, which in turn would partially accomplish the Strategy Element. Appendix B to the PWCS provides the scope and operational concept for each Major Initiative. Under each Major Initiative, Appendix B then establishes an Operational Sequencing plan for all the Milestones associated with that particular initiative, by providing target dates for initial, supplemental and full operating capabilities for a specific Milestone. The PWCS also builds upon and incorporates the MTSA into the Operational Design of MHLS.

Figure 2
PWCS Deployment Plan Concept and Alignment^{xix}

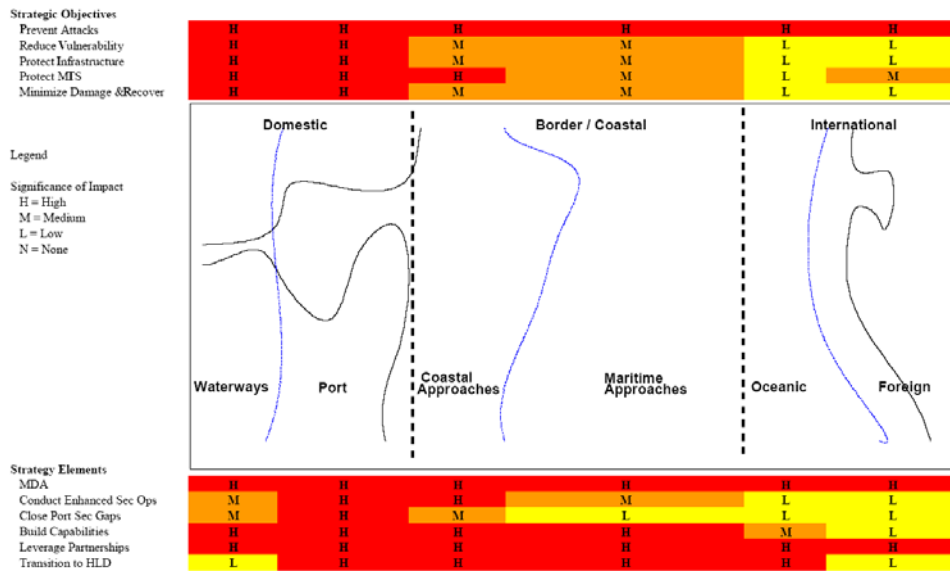


The PWCS leads off its discussion of the Operational Concept for MHLS with: “The overall objective of the Coast Guard’s efforts to provide for the security of the United States’ Maritime Domain is to flatten and reduce the terrorism-related risk within the maritime domain.”^{xx} This distillation of the strategic objectives is the nexus of the MHLS mission. Recognizing that it is impossible to prevent all terrorism, the Coast Guard strives to reduce the risk of an attack by creating “. . . basic functions of preventing attacks, reducing vulnerabilities—while preserving the free flow of commerce—and minimizing damage and recovering from attacks that do occur.”^{xxi} Using risk-based management, the Coast Guard will identify those areas at the highest risk of attack through complex risk assessment tools and concentrate resources and efforts in those areas. The PWCS naturally capitalizes on the operational functions of time and space, given the very limited resources of the Coast Guard. The plan is basically a layered operations or defense in depth concept to provide “. . . multiple opportunities to detect and interdict terrorist activity as far from our cities, ports and the Marine Transportation (MTS) as possible. Each geographic layer distinguishes itself from others in terms of U.S. authority and capability to affect terrorism.”^{xxii} Therefore, operations are conducted concurrently and vary between layers. The Coast Guard will use

law enforcement and port security operations to detect and prevent the terrorist attacks, while simultaneously focusing on readiness to mitigate the effects of an attack should one occur.^{xxiii}

This defense in depth concept (Figure 3) is divided into three zones with two geographic layers for each zone. The plan describes authorities and operations to counter threats and vulnerabilities as the situation warrants in each layer. The Domestic Zone consists of Waterways and Ports. Next is Border/Coastal Zone consisting of Coastal Approaches and Maritime Approaches. The outer most zone is the International Zone that is comprised of the Oceanic and Foreign layers. The Foreign layer consists of the waters that include a foreign nation’s EEZ, ports and territory. Although the United States has no jurisdiction in this layer, IMO regulations, bilateral agreements, and the Port State Control Program can significantly influence foreign security efforts.^{xxiv}

Figure 3
Geographic Zones and Layers of MHLs^{xxv}



Conceptually, the Coast Guard would have six opportunities to apply different resources to detect and intervene in a terrorist plot originating from overseas via the maritime

route. There are hundreds of variables and resulting courses of action. The PWCS sets up an architecture to apply maximum resources to actionable intelligence in the areas of U.S. jurisdiction and coordinates passive regulatory requirements to pick up deviations or “harden targets” in the United States, and to a lesser extent, in foreign ports. MDA triggers the active systems such as vessel boardings and Security Zone enforcement, while the passive systems such as vessel security plans and port security plans reduce the chances of attack and set up a response system if an attack is successful.

The PWCS succinctly summarizes its concept of operations as: “Operations against external threats depend on international engagement and cooperation, wide-area surveillance, coastal sea-control, maritime interdiction and deterrence operations. Operations against internal threats focus on port security and preventative measures, harbor defense and vessel movement and control operations.”^{xxvi}

Analysis

A broad examination of the PWCS from the Vego perspective of the key components of Operational Design^{xxvii} will paint a positive general overview of the Operational Design for MHLS while identifying two of the more significant inadequacies.

Guidance The PWCS is rich in guidance; both identifying from where it received guidance from superiors, as well as giving explicit guidance to subordinate commands. It derives what it calls its Supporting Objectives directly from the stated Strategic Objectives of The U.S. Coast Guard’s *Maritime Strategy for Homeland Security*. But, it is the unofficial innocuous “overall objective” hidden in the operational concept for MHLS in the Executive Summary that deserves special attention. The statement, “The overall objective of the Coast Guard’s efforts to provide for the security of the United States’ Maritime Domain is to flatten

and reduce the terrorism-related risk within the maritime domain”^{xxviii} summarizes all the objectives and actions envisioned in the MHLS Operational Design. However, upon reading this overarching PWCS objective along with the many others, it becomes obvious the Coast Guard is missing measures of effectiveness or the definition of victory which is a complicated issue given the nature of the threat. The Coast Guard recognizes this and is working to correct it with the next iteration of the PWCS.^{xxix} However, it is a critical flaw in that the success of the Operational Design hinges on the clear definition of the desired end state and ensuing objectives.

The Coast Guard as an organization is a recognized expert at brokering resources to the maximum extent possible. Their approach to the PWCS is no different. Recognizing that a 40,000-person workforce is insufficient to protect every avenue of approach to America’s MTS and maritime critical infrastructure, the Coast Guard cleverly leverages the operational functions of time and space by adopting the defense in depth approach to MHLS. By pushing the maritime defenses out to foreign shores, they substantially multiply their opportunities to detect and react to a threat, thus theoretically gaining time to marshal their limited resources to a particular threat. If unable to have success in one layer, this approach allows them to regroup and come at the threat from a different direction, time and place of their choosing. Additionally, as part of this layered defense, the MTSA and ISPS requirements for security standards and plans are force multipliers for the Coast Guard. Both initiatives require specific improvements to existing infrastructure, which in addition to physical barriers includes additional security personnel in most cases. This theoretically frees the Coast Guard forces of domestic “Guard Duty” to focus on detection and interdiction. The MTSA family of plans requirements and a maritime intelligence system,

along with Port Security Committees open lines of communication and dialogue with sister agencies and industry allowing every one to leverage each others' resources in an emergency. The plans would ensure each player knows its role in an intervention or response; what are each organization's capabilities and hopefully ensure resource compatibility or "work arounds" ahead of time.

The PWCS clearly contains a restriction and several constraints. Operations will be conducted within the rule of existing U.S. and International Law. At the same time, prosecution of the MHLS mission will not come at the expense of other Coast Guard missions.^{xxx} The acceptable levels of performance in the other missions are yet to be defined. The MHLS mission must also facilitate commerce while detecting and defeating terrorist threats.^{xxxi}

Desired End State The PWCS states "Supporting objectives amplify the strategic objectives and are the desired components of the end state that will drive the organization to achieve the established strategic objectives."^{xxxii} Therefore, the PWCS clearly articulates the desired end state. However, this creates substantial confusion from the Operational Art perspective. How can the end state be the supporting objectives to the strategic objectives? The desired end state should define the objectives not the other way around. Perhaps this is a classic example of semantics, and reinforces the value of a joint doctrine common language. Assuming it is a case of semantics, the eight components to the desired end state are clearly stated, but are they truly achievable or measurable? There is no way to measure detection of all terrorists' exploitation of the Maritime Domain, for example.^{xxxiii} If it is not a case of semantics, then it appears that operations are driving strategy,^{xxxiv} a cardinal sin in Operational Art. The desired end state should be the starting point for all military operations.

It gives the military the perspective from which to establish their objectives to create the situation for “other sources of national power” to achieve the desired end state.^{xxxv} Without it, the rest of the plan is tainted regardless if there are clear objectives. This creates a rudderless operation, exponentially increasing the chance of failure from the strategic perspective.

Objectives The Operational Design principal elements of guidance, objectives and desired end state are closely interwoven and dependent upon one another for providing the proper direction for the remainder of the operational design. As discussed above, the PWCS objectives are clearly stated. Demonstrating regressive planning to ensure proper sequencing of actions to achieve the objectives of the next level, each level flows evenly in both directions between strategic and tactical. However, there appears to be a disconnect at the desired end state / strategic objective nexus which casts doubt on the credibility of the ensuing objectives and if they are in fact aligned with the actual desired end state that has yet to be defined. An Operational Design analysis of the PWCS supports observations from within the Coast Guard that there is no end state defined within the MHLS mission.^{xxxvi} Such a condition fatally flaws the PWCS until a desired end state is defined. In addition, the strategic to tactical span of the PCWS appears to be a deficiency from the Operational Art perspective and makes an interesting point of departure for further study.

Identification of the Enemy's Critical Factors Although there is no specific discussion concerning the enemy's critical factors or center of gravity (COG) in the PWCS, the Coast Guard's selection of a maritime defense in depth plan indicates that they have identified a critical vulnerability that directly impacts the enemy's COG. At the present time in the war on terror, the enemy COG is perceived to be a terrorist organization's leadership

cell or C2 as evidenced by the U.S. targeting of senior Al Qaeda leadership. However, in this new age of global terrorism with the loosely networked cellular organization of terrorism, the COG can also be the individual terrorist cells.

Since the Coast Guard is defending against all terrorism, international and domestic, traditional and cellular, they must focus on the commonalities of terrorist critical factors that they can actually attack. Authorities and resources prohibit the Coast Guard from directly attacking the normally land based leadership or cells. The two critical factors that traverse the maritime domain are the enemy's financial power and their clandestine mobility. Both are critical strengths in that they are absolutely essential and adequate for global and domestic terrorism. Yet, both are directly linked to the terrorists' COG and in the maritime environment they are very open to attack by the Coast Guard; therefore, they are critical vulnerabilities, for denial of either could significantly disrupt the enemy COG. The PWCS focuses on mobility as a critical vulnerability with maritime interdiction as a method of combat force employment along the six geographic layers and the foreign and domestic ports as decisive points. In each layer, different resources and authorities are used to conduct the maritime interdiction effort. In addition, it briefly mentions the possibilities of synergistic effects of the plan on drug interdiction operations, alluding to the relationship between terrorism and smuggling as a funding source.^{xxxvii}

Operational Direction/Axis Again, the choice of defense in depth indicates that the Coast Guard correctly identified multiple enemy operational directions/axes. A huge, porous border and open society permits a virtual three-dimensional, 360-degree axis of approach for the terrorists to attack the U.S. The Coast Guard's plan in depth counters the enemy's multi-front direction/axis by pushing MHLS operations out to many of the world's ports, further

attacking or restricting the enemy's critical vulnerability of mobility before it deploys to America. The Border/Coastal Zone gives the Coast Guard ample time to react to credible intelligence to intercept maritime terrorists operations that get through the International Zone. As the threat gets closer to the U.S., maritime resources and defenses become denser, increasing the chances of interdiction. In the intimate Domestic Zone, defenses comprised of increased security measures at facilities and on vessels coupled with the protective resources of federal, state and local agencies, defend against both external and internal threats.

Interior vs. Exterior Lines As a primarily defensive operation, the PWCS naturally emphasizes interior lines of operations for the MHLS mission. The vast majority of operations are to be conducted inside the territorial waters of the U.S. In keeping with Milan Vego's advice to ". . . operate along relatively short, multiple, and interior lines",^{xxxviii} the majority of forces and assets are positioned inside and around coastal ports and critical infrastructure. This concentration of forces in central locations such as ports also follows Vego's advice.^{xxxix} The Coast Guard shrewdly uses exterior lines in its Foreign layer of the defense in depth concept. By putting the onus on foreign nations and ports to provide an acceptable standard of security within their ports with Coast Guard oversight, the Coast Guard establishes exterior lines of operation with minimal expense in resources. Furthermore, there are virtually no lines of communications to maintain, support and protect. This complements the centrality of forces concept at home while gaining the benefits of exterior operations and smartly accomplishes Vego's edict, "Favorable lines of operations and communications facilitate protection of one's own forces' operational center of gravity."^{xl}

Operational Idea A complete analysis of the Operational Idea or Scheme of the PWCS is beyond the scope of this paper and may be an interesting point of departure for further research. In addition, the PWCS is a first draft document that substantially reinvents the operational concept of a re-emphasized Coast Guard mission. Although it frequently delves into all levels of Operational Art, it essentially creates a cohesive architecture for the conduct of MHLS operations and does not appear to have fully developed all aspects of its Operational Scheme. Yet, there is a substantial issue within the Operational Scheme that directly impacts core elements of the Operational Design of MHLS, that of Command Organization.

Closely related to the Principles of War and the Principles of Coast Guard Operations^{xli} concept of unity of command/unity of effort, the command organization delineates responsibilities, coordinates activities and adjusts the mission architecture to meet the specific operational objectives in the effort to accomplish strategic goals. The PWCS does not discuss who the operational commander is or the C2 organization of the MHLS mission. The issue is not a surprise because there was a C2 dilemma brewing in the Coast Guard for years. The C2 issues of MHLS exacerbate a present Coast Guard command structure two-fold problem. The first is in the unity of effort between the Operations (“O”) and the Marine Safety (“M”) communities and the second is the unity of command issue in that there is no Coast Guard doctrine assigning a specific billet as Operational Commander.

The first issue stems from the fact that the “M” community is vested with the authority to execute the overwhelming majority of MHLS operations, but the “O” community has the vast majority of resources to conduct the mission. On a tactical level, “M” and “O” units have overlapping geographic AORs. Under this configuration, it is

frequently up to the personalities of the tactical commanders to build command relationships that can successfully execute the mission at hand. The more successful MHLS tactical operations were heavily dependent on personal relationships in the wake of September 11th.^{xlii}

The tension placed on this antiquated command structure resulted in a very recent Coast Guard initiative to create new organizational structures called Sectors. These Sectors will “. . . integrate the functions now performed separately by [Operations Ashore], Marine Safety Offices, Vessel Traffic Services and in some cases, air stations”^{xliii} under one unit field commander. This initiative will solve the unity of effort problem in MHLS operations and once mature, end counter-productive intra-service parochialism.

If “[a] divided command invariably has been a source of great weakness, often yielding fatal consequences”^{xliv}, an undefined command must be equally malevolent. The Coast Guard briefs that unlike its counterparts in DOD; its Commandant is both the Operational Commander and Administrative Chief of the service.^{xlv} Yet, if one asks any Coast Guard officer familiar with operational art, “Who is the operational commander?”, one will receive one of two replies—the Commandant or the Area Commander. An exhaustive search indicates that there is no doctrine specifying who the Operational Commander is. The Area Commanders assert that they are operational commanders routinely through message traffic under the heading of “Operational Commander’s Intent.”^{xlvi} The Area staffs believe themselves to be operational commanders’ staffs.^{xlvii} At the same time, the Coast Guard Commandant’s staff is performing operational functions such as promulgating the PWCS, which is theater strategic in nature, but spans the entire spectrum of Operational Art. In the current environment of drastic changes within the organization and implementation of MHLS

initiatives, the absence of a doctrinal operational leadership makes the situation ripe for miscommunication and errant efforts at the operational and tactical levels of MHLS.

Recommendations

With a few notable exceptions, the Maritime Homeland Security Integration Team substantially addressed the key components of an Operational Design in their draft of the PWCS. Unfortunately, the notable exceptions are critical elements for the success of MHLS operations.

The desired end state for MHLS should be re-addressed. While the PWCS asserts that the eight Supporting Objectives are the components of the desired end state, it never succinctly states what the desired end state is. Eight components are cumbersome to remember let alone plan operations to achieve them. The end state should be distilled down to one statement that is measurable so that the Operational Commander will know when he has achieved it. The desired end state is the conditions that the senior political leadership wants to exist after operations.^{xlviii} Yet, upon examination of the *National Strategy for Homeland Security*, it becomes apparent that it too is missing a clearly articulated desired end state. Therefore, the Coast Guard should engage the Department of Homeland Security and ask for the department's desired end state for the Homeland Security mission, to include measures for the Coast Guard to gauge its progress in achieving the end state. It should also contain any overriding restraints and constraints.

In the meantime, the PWCS statement, "The overall objective of the Coast Guard's efforts to provide for the security of the United States' Maritime Domain is to flatten and reduce the terrorism-related risk within the maritime domain" is an excellent point of reference for continued development of the PWCS. This appears to summarize all the

objectives and actions envisioned in the MHLS Operational Design; therefore, it is indicative of what the Coast Guard perceives the desired end state to be. However, it too is missing measures to define victory or success. As painful as it may be politically, the Coast Guard needs to define the acceptable quantitative level of risk, along with envisioned restraints and constraints for this to be a well-crafted desired end state. Once the desired end state is refined, the Coast Guard should re-examine all the objectives and actions contained in the PWCS to ensure that there is proper alignment throughout the plan.

However, given the nature of the threat, does HLS have an “end state” or is it actually a “steady state” that the United States is facing? This question should be investigated further, for an HLS end state would be a utopia. A suggested desired end state for MHLS is “The nation will achieve a steady state of terrorism awareness and prevention, while maintaining readiness to promptly respond to and mitigate damages of a terrorism attack.” This end state recognizes that there is no absolute way to prevent terrorism, but reduces the likelihood of a terrorism attack and positions the government and society to deal with one that does occur.

The Coast Guard has made drastic course changes and faces immense challenges that the current legacy system of C2 cannot manage efficiently. The current confused situation will, at the very least, waste valuable resources in duplicitous efforts and may even jeopardize the MHLS’ chances for success. To ensure the success of MHLS through unity of command, the Coast Guard should define who the MHLS Operational Commander is and the PWCS is the perfect place to put it into doctrine.

In its determination of who the operational commander is, the Coast Guard should heed Milan Vego’s advice and avoid a divided command, specifically designating both Area Commanders as operational commanders. Since MHLS is a national operation, one person

should be in overall command for the same reasons articulated when the new Coast Guard tactical unit Sectors were established--essentially to consolidate all operations and support elements under one commander, provide a central focal point for partnerships in the maritime domain, and provide common operating picture in one command center.^{xlix} In addition, one operational commander will be better able to ensure a common security standard for the entire U.S. Maritime Domain and provide one theater commander with principally the same geographic concerns to interface with his/her counterpart at U.S. Northern Command (NORTHCOM). All of these elements are currently in place with the Commandant as the Operational Commander. But with the new mission requirements of MHLS, the Coast Guard's move to a new department and the major recapitalization effort of offshore capabilities (Deepwater), the Commandant's span of control is taxed.

As a point of departure for further discussion, a viable solution to this problem would be to appoint one Area Commander as the Operational Commander and the other as the Deputy Operational Commander. The Operational Commander would delegate operational control of the spectrum of missions and assets in the existing Area geographic area of responsibility. The Commandant would retain administrative control and act as the service's Administrative Chief, like his counterparts in the Department of Defense.

Conclusion

The first draft of the PWCS provides the basis for an overarching operational architecture to implement and achieve the Coast Guard's MHLS objectives. There are no easy answers to the MHLS mission. Much like the rest of the federal, state and local government agencies responsible for protecting American citizens and their way of life, the Coast Guard is struggling with asymmetrical issues from a symmetrical perspective. And

like the other agencies, they are struggling to reinvent themselves and learn new paradigms of operations and strategic methodology to mitigate the threat of terrorism. The draft PWCS is a significant step in that re-birth for it gives the Coast Guard an Operational Design for the MHLS mission. However before they release it, the Coast Guard needs to refine the desired end state of the MHLS mission and fully develop the Operational Idea, particularly the Command Organization. The operational commanders and tactical commanders want and need the guidance and architecture the PWCS provides. The Coast Guard should expedite its release. The American public deserves no less.

Appendix A

The Evolution of Maritime Homeland Security

The Coast Guard's approach to MHLS began September 11, 2001 with essentially an immediate lockdown of the American MTS. The Commandant directed that all COTPs take immediate positive control of their ports, which translated to directing all port traffic to stop, and each COTP to assess the who, what and where of vessels that were in their zones. Soon thereafter, the Coast Guard adopted a tactical initiative started by the COTP in San Francisco: the Sea Marshall Program put armed Coast Guard personnel on high value commercial targets transiting the ports such as cruise ships and oil and chemical tankers. They also increased their required vessel arrival notification to 96 hours and began port vulnerability assessments, including an inventory of critical infrastructure in and around U.S. ports.¹ Certain critical assets, such as nuclear power plants had Security Zones, designated areas that were off-limits to mariners without the express permission of the COTP. Some of these Security Zones were enforced with a security presence while others were not due to limited local resources. With the exception of sporadic specific guidance from Headquarters, each tactical commander instituted his or her security measures to address area specific concerns, until Operation Neptune Shield (ONS) was launched in December 2001.

The first MHLS operation, the ONS concept of operations stated that force and security postures were to be “. . . tiered to provide a sustainable level of enhanced port security and Maritime Domain Awareness, with the capability to surge to heightened levels of security in response to specific threat and warnings targeted at geographic areas and time

¹ James D. Hessman, “The Maritime Dimension, Special Report: The Coast Guard’s Role in Homeland Defense,” *Sea Power*, 45 (April 2002): 30.

frames.”² Basically, to increase maritime security, the strategic commander provided the tactical commanders with a “buffet” of activities that could be tailored to their port.³

Interestingly, ONS was promulgated two years before any clearly stated MHLS objectives were published in the document Maritime Strategy for Homeland Security.

Many of the initiatives discussed in the main body, such as MDA, MTSA, and ISPS were instituted since ONS began. However, until the Ports, Waterways, and Coastal Security Strategic Deployment Plan (Draft), there was no single document amalgamating all the initiatives, programs and regulations into a cohesive architecture for MHLS.

² U. S. Coast Guard, Operation Neptune Shield, Concept of Operations for Maritime Homeland Security, COMDT COGARD Washington DC, P 172345Z DEC 01.

³ There are three levels of security for the Marine Transportation System that loosely parallels the Homeland Security Advisory System. Maritime Security Level (MARSEC) 1 is designed to provide a nationwide standard level of security. MARSEC 1 consists of basic security protocols, such as intelligence sharing between agencies and the private sector, establishing venues for reporting suspicious activities, Sea Marshall Programs, and enhanced screening of passengers and cargo; 21 actions in all were suggested for the OCMI to undertake. MARSEC 2 and 3 were surge levels that would provide the tactical commander with additional resources for tailored responses to specific threats. MARSEC 2 may include deployment of large cutters and aircraft, limited reserve call up, full time security presence at high risk locations and possible additional resources from the Department of Defense. MARSEC 3 is the highest level and is a more robust, high intensity and short duration operational level of MARSEC 2.

Appendix B Geographic Layers of the PWCS

The MHLS defense in depth concept is divided into three zones with two geographic layers for each zone. The plan describes threats, vulnerabilities and operations to counter both as the situation warrants. The Domestic Zone consists of Waterways and Ports. Waterways are those navigable internal waters within the U.S. Baseline and Ports layer extends from these navigable waters seaward to the U.S. Baseline to include nodes of intermodal infrastructure. The next zone is Border/Coastal Zone consisting of Coastal Approaches and Maritime Approaches. The Coastal Approaches is the area of water from the U.S. Baseline seaward to 24 nautical miles (NM) and may extend up to 50 NM at certain important military or high value ports. The authority in this layer is predicated on U.S. territorial sea sovereignty and rights over its contiguous zone. The Maritime Approaches extends from the seaward edge of the Coastal Approaches to the edge of the U.S. Exclusive Economic Zone, usually 200 miles from the baseline. U.S. jurisdiction in this area is largely dependent on the target vessel's registry. The outer most zone is the International Zone, which is comprised of the Oceanic and Foreign Layers. The Oceanic layer consists of the waters from the seaward edge of the Maritime Approaches to a foreign nation's EEZ. Again, U.S. authority is dependent on the vessel's registry. The Foreign Layer consists of the waters that include a foreign nation's EEZ, ports and territory. Although, the U.S. has no jurisdiction in this layer, IMO regulations, bilateral agreements, and the Port State Control Program can significantly influence foreign security efforts.⁴

⁴ Ports, Waterways, and Coastal Security (PWCS) Strategy Deployment Plan (DRAFT), iii-iv, 14-18.

NOTES

ⁱ Congress, House, Subcommittee on Coast Guard and Maritime Transportation, Hearing on Port Security, U.S. House of Representatives, 108th Congress, 1st sess., 3 June 2003, <<http://www.house.gov/transportation/cgmt/06-03-03/06-03-03memo.html>> [07 January 2004]. The document continues that in just one year, the MTS will convey over 2 billion tons of freight, 3 billion tons of oil, 134 million ferry passengers and 7 million cruise ship passengers. 200,000 foreign merchant sailors manning 7500 foreign ships will transit the MTS each year to offload 6 million containers in American ports. Many of these ports are vital to America's military sealift points of departure. Much of America's critical infrastructure lies along the MTS and coastal areas. Along with most of the nation's densest population centers, nuclear power plants, oil refineries, chemical plants, and national icons are located on or very near American waterways. Although the U.S. has 361 ports, most of the activity is concentrated in only 50 ports that handle 90 percent of the cargo tonnage.

ⁱⁱ Ibid.

ⁱⁱⁱ In the context of this paper, the HLSA 2002 created the Department of Homeland Security (DHS), defined DHS' missions and transferred the U.S. Coast Guard intact with all of its missions to the new Department. U.S. Coast Guard, Ports, Waterways, and Coastal Security (PWCS) Strategy Deployment Plan (DRAFT), (Washington, DC: 30 September), 6-7.

^{iv} "The MTSA 2002 integrates the myriad federal, state, local and private law enforcement agencies overseeing the security of the international borders at America's seaports. The bill authorizes more security officers, more screening equipment and the building of important security infrastructure at seaports." Ports, Waterways, and Coastal Security (PWCS) Strategy Deployment Plan (DRAFT), 7. In overview, the MTSA requires port vulnerability assessments with follow on requirements for a family of maritime security plans at the national, regional and local level to include individual vessel and facility security plans. It also mandates security assessments at certain foreign ports and gives the COTP the ability to deny entry of vessels that depart from foreign ports that do not meet the standards. Along with several provisions to improve container security, the MTSA requires that a maritime intelligence system for collection and analysis information about vessels operating in U.S. waters be developed. Ports, Waterways, and Coastal Security (PWCS) Strategy Deployment Plan (DRAFT), 7-8.

^v Duane Smith, Chief, Maritime Homeland Security Integration Team, U.S. Coast Guard, and Mr. Joe Drenzo III, LANTAREA External Anti-Terrorism Coordinator, telephone interviews with author, 23 January 2004, and 16 December 2003 respectively.

^{vi} Milan Vego, Operational: Warfare (NWC1004), (Naval War College, Newport, RI: 2000), 476.

^{vii} U.S. Coast Guard, U.S. Coast Guard: America's Maritime Guardian, Coast Guard Publication 1 (Washington, DC: 1 January 2002), 6.

^{viii} U.S. Coast Guard, "Units and locations – where you can find us", <<http://www.uscg.mil/units.html>> [7 February 2004]

^{ix} Smith, interview.

^x See Appendix A for more details on the evolution of MHLS after September 11, 2003.

^{xi} Thomas H. Collins, "Statement", U. S. Congress, Senate, Committee on Commerce, Science, and Transportation, Transportation Security, Hearings before the Committee on Commerce, Science, and Transportation, U.S. Senate 108th Congress, 1st sess., 9 September 2003, 2.

^{xii} Ibid., 7-8.

^{xiii} *Ibid.*, 4.

^{xiv} *Ibid.*, 4.

^{xv} Ports, Waterways, and Coastal Security (PWCS) Strategy Deployment Plan (DRAFT), 6.

^{xvi} *Ibid.*, iv-v.

^{xvii} An example of this is the current initiative underway to institute new security measures for Merchant Mariners Credentials. A Merchant Mariner's Credential serves as official photo identification, states the holder's marine qualifications, gives him access to restricted areas in a port and can be substituted for a passport in some cases. Its fraudulent use could pose a security threat. The Marine Safety program and associated field units responsible for issuing Mariner Credentials instituted new screening procedures for applicants and began issuing new tamper resistant credentials to prevent fraudulent application and use of the credentials. LCDR Tina Bassett, "New Security Measures in Mariner Credentials", *Proceedings*, 60 (Arlington, VA: April-June 2003), 27. This initiative attempts to achieve the PWCS (23) Standard, "Screen and establish positive identification of 100% of personnel working within MTS", which in turn supports the PWCS (23) sixth Supporting Objective, "Legitimate users/uses of the MTS are identified and supported. Non-legitimate users are identified and their use of the MTS is denied" under the fourth Strategic Objective stated in the PWCS (23), "Protect the U.S. Maritime Transportation System while preserving the freedom of the Maritime Domain for legitimate pursuits."

^{xviii} Ports, Waterways, and Coastal Security (PWCS) Strategy Deployment Plan (DRAFT), vi.

^{xix} *Ibid.*, 10.

^{xx} *Ibid.*, iii.

^{xxi} *Ibid.*

^{xxii} *Ibid.*

^{xxiii} *Ibid.*

^{xxiv} *Ibid.*, iii-iv, 14-18. Also, see Appendix B for details of Geographic Layers of the PWCS.

^{xxv} *Ibid.*, 14.

^{xxvi} *Ibid.*, 12.

^{xxvii} The key components are Strategic/ operational guidance, desired end state, objectives, identification of the enemy's Critical Factors, operational direction / axis, interior versus exterior lines and operational scheme. Vego, 469-477.

^{xxviii} Ports, Waterways, and Coastal Security (PWCS) Strategy Deployment Plan (DRAFT), iii.

^{xxix} Smith, interview.

^{xxx} Ports, Waterways, and Coastal Security (PWCS) Strategy Deployment Plan (DRAFT), iii, 11.

^{xxxi} It could easily be argued by industry that the cost of new security standards will be substantial. However, international studies counter this argument and say that the benefits realized from new security measures could "...serve to counter-balance the increase in security costs." Organisation for Economic Co-Operation and

Development, Directorate for Science, Technology and Industry, Maritime Transport Committee, Security in Maritime Transport: Risk Factors and Economic Impact, (Paris: July 2003)

^{xxxii} Ports, Waterways, and Coastal Security (PWCS) Strategy Deployment Plan (DRAFT), iv.

^{xxxiii} The first Supporting Objective is “All potential terrorist attacks and terrorist exploitation within the U.S. Maritime Domain are detected.” Ibid., iv.

^{xxxiv} This inverse movement of tactics driving strategy or operations is not new to the Coast Guard. When seeking the operational design concept of MHLS from an Area Commander’s staff, one is pointed to specific tactical units for a model port concept that the operational level commander is seeking to emulate for the Operational Idea. Joe DiRenzo, USCG, Interview.

^{xxxv} Vego, 433.

^{xxxvi} Smith, and DiRenzo, interviews.

^{xxxvii} Ports, Waterways, and Coastal Security (PWCS) Strategy Deployment Plan (DRAFT), 2-3.

^{xxxviii} Vego, 474.

^{xxxix} Ibid.

^{xl} Ibid.

^{xli} U.S. Coast Guard: America’s Maritime Guardian, 71.

^{xlii} Kevin Cook, Chief of Naval Operations Strategic Studies Group; Commanding Officer, Marine Safety Office Houston, Jun 2001- Jul 2003, interview with author, 12 January 2004.

^{xliii} U. S. Coast Guard, Commandant’s Direction: Readiness, People, Stewardship: Establishing Coast Guard Sectors, COMDT COGARD Washington DC, R 090246Z JAN 04.

^{xliv} Vego, 187.

^{xliv} Mark Campbell, Senior U.S. Coast Guard Advisor, U.S. Naval War College, U. S. Coast Guard Capabilities, Limitations & Challenges, Power Point Service Brief, U.S. Naval War College, Newport, RI: Winter Trimester 2003.

^{xlvi} U. S. Coast Guard, Operational Commander’s Intent – Thoughts on Leadership, Ethics and Character in these Times of Challenge and Juniority, COMLANTAREA COGARD, Portsmouth VA, R 241621Z OCT 03.

^{xlvi} DiRenzo, interview.

^{xlvi} Vego, 637.

^{xlix} Commandant’s Direction: Readiness, People, Stewardship: Establishing Coast Guard Sectors, R 090246Z JAN 04.

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