STRATEGY RESEARCH PROJECT

SON OF MARITIME PREPOSITIONING FORCE

BY

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INTRODUCTION

In the National Security Strategy (NSS), President Clinton states his foremost mission and constitutional duty is to protect the security of our country--our people, territory, and way of life.[1] To support this mission, the NSS articulates a broad strategy based on three fundamental and complementary objectives: to enhance our security, to bolster our economy, and to promote democracy abroad. These critical objectives are supported and promoted by the integration and application of diplomatic, economic, informational, and military "means."

Specific ways and means the military can support national strategy may be found in the National Military Strategy (NMS). This document echoes NSS objectives and supports the President's concept of engagement. Engagement enables the United States to protect and pursue national interests, exercising its leadership throughout the world and using its power to influence the global environment.[2] Thus through the NMS, the Department of Defense is designed to shape the strategic environment, to respond to the full spectrum of crises, and to prepare to meet the challenges of an uncertain and ambiguous future.

During the present post-Cold War strategic pause, we must adequately prepare and effectively modernize our force to shape the future strategic environment. As stability is maintained and the defense budget continues to decline, more and more of the total force will return to the continental US (CONUS). The

National Defense Panel clearly acknowledges this change: "We must be able to project military power and conduct combat operations into areas where we may not have forward-deployed forces or forward bases."[3] Given our decreasing force structure and the concurrent reduction of overseas basing, our ability to shape and respond is increasingly dependent on the forward presence of our Naval Expeditionary Forces. Moreover, our NSS now more than ever relies on strategic mobility for power projection.

Maritime prepositioning enhances strategic deployment options. The Marine Corps' Maritime Prepositioning Force (MPF) provides unique capabilities that support several key strategic concepts: strategic agility, power projection, and decisive force.

The challenges facing future US strategic mobility forces will be increasingly formidable. Future adversaries will have learned how to circumvent our success in the Gulf War. These opponents will neither give us six months to deploy and build combat power in the region nor allow us uninterrupted use of integral airfields and ports.[4] This study analyzes the role of the MPF in our NMS.

The following overview of MPF shows how we got to where we are. Cumulative MPF capability will evolve over time based on the requirements and opportunities associated with future Naval Expeditionary Force (NEF) employment. Operational Maneuver From the Sea (OMFTS) is the Marine Corps' evolving concept for the

projection of power ashore. Thus OMFTS provides the vision of where we are going. It lays the essential groundwork for identifying the desired capabilities for the "Son of MPF."

Four future MPF alternatives offer varying levels of support to OMFTS. This study describes these alternatives in broad detail. Finally, it recommends a "chosen Son of MPF" as the best or most viable way to support the OMFTS concept.

BACKGROUND

The 1979 Iranian hostage crisis highlighted a significant strategic deficiency. In contemplating potential response options, the US discovered it was unable to project and sustain substantial military force to the Persian Gulf in a timely manner.[5] The post-Vietnam US military, challenged to restore combat readiness to a hollow force, found it did not possess the ability to adequately respond to this crisis. Stability in this region, the worldwide source of critical oil supplies, constituted a vital national interest. Strategic mobility had to improve.

The Marine Corps proposed to address this deficiency by prepositioning a Marine Amphibious Brigade's suite of combat equipment, along with 15 days of supply, aboard existing Military Sealift Command ships to be berthed at Diego Garcia.[6] If a crisis erupted, the ships would sail to a port in the area of interest. Then a deployed brigade of Marines would fly to the region and "fall in" on their equipment. Maritime prepositioning

could combine the capacity of sealift with the speed of airlift. This initial concept eventually led to the development of the Maritime Prepositioning Ship (MPS) program, which entered service in 1984. Today these ships support our Maritime Prepositioning Force (MPF). By definition, MPF operations are designed to facilitate the rapid deployment and assembly of a Marine Air Ground Task Force (MAGTF) in a secure area, using a combination of strategic airlift and forward-deployed maritime prepositioning ships.[7]

The MPF consists of two components. The first includes 13 ships, civilian-owned and operated under charter to the Military Sealift Command. These ships are organized into three squadrons (MPSrons). Capable of responding to crises anywhere on the globe, the MPSrons are strategically located in Guam, Diego Garcia, and the Mediterranean. Each squadron is loaded with associated combat equipment and 30 days of supplies to support a MAGTF comprised of a Regiment, Marine Aircraft Group, Combat Service Support Element, and Command Element. Depending on the scenario, one ship or an entire squadron may be off-loaded. Individual ships are "combat loaded" to support tailored response options throughout the spectrum of conflict. For example, one ship in each squadron is designed to augment Amphibious Ready Group capabilities, while other ships are loaded to support disaster relief and humanitarian operations.

MPF operations require a secure port and airfield. If developed port facilities are not available, MPSrons maintain a limited ability to offload cargo "in stream" (at sea) via on-board crane, landing craft, and causeway. In addition, MPS ships are capable of piping bulk water and fuel ashore.

The second component of the MPF is the MAGTF. MPF operations are predicated on the concept of "flying in" the Marines, sailors, and aviation units that form the MAGTF. An MPF fly-in-echelon (FIE) may consist of up to 17,600 Marines, 1100 sailors in the Naval Support Element, as well as 120 fixed and rotary wing aircraft. The MPF is designed to be combat ready 10 days after the FIE joins its equipment. Following offload, the MPF shipping may either be returned to TRANSCOM to support follow-on deployment or retained in the AOR to support MPF employment in a swing force capacity.

The MPF has no forcible entry capability and requires a benign environment throughout the arrival and assembly phase. Amphibious forces provide the means necessary for forcible entry from the sea. Therefore, while MPF may complement (augment or reinforce) amphibious operations, it is not a substitute for amphibious forces. Together, amphibious forces and MPF constitute an enabling force, which can facilitate the arrival of follow-on forces. MPF has proven to be an integral element of Naval Expeditionary Forces, providing visible forward presence and credible crisis response.

Recent employments of MPF reflect its flexibility and utility. In August 1990, MPF MAGTFs from I Marine Expeditionary Force were the first fully supported combat forces to arrive in Saudi Arabia during Operation Desert Shield. During 1992, MPF MAGTFs were employed as part of the initial US response to the crisis in Somalia. Additionally, the MPF has responded to natural disasters such as the eruption of Mt. Pinatubo and supported refugee operations during Operation PROVIDE COMFORT. Despite the success enjoyed in this variety of isolated employments, an overall review of the adequacy of maritime prepositioning was in order.

The rapid response of the MPF during the 1990 crisis in Southwest Asia provided another test of US power projection. The strategic mobility demands associated with Desert Shield and Desert Storm were met by utilizing existing resources and taking the **necessary** time--six months. The NSS has charged the Armed Forces to maintain capability to deter and defeat large-scale, cross-border aggression in two distant theaters in overlapping time frames.[8]

In analyzing US military forces' ability to support that strategy, the 1992 Department of Defense Mobility Requirements Study (MRS) identified significant shortfalls in strategic mobility capability. The MRS generated detailed recommendations addressing all facets of strategic mobility: sealift, airlift, and ground transportation--combined with prepositioned supplies

and equipment both ashore and afloat. The MRS provided specific guidance for both the Army and Marine Corps.

Realizing the tremendous capacity and capability resident in maritime prepositioning, the MRS recommended the creation of an Army Afloat Prepositioning Program.[9] The study directed the Army to preposition a heavy combat brigade's equipment and a sustainment package at sea. The resulting Army Prepositioning Stocks (APS) program was approved and funded in 1993. The APS provides approximately two million square feet of storage for Army combat, combat support, and combat service support equipment. The APS is designed to introduce a heavy brigade and basic theater logistics infrastructure within 12 days. Such rapid projection of heavy combat power serves to minimize **early risk** during a crisis. This force is designed to contribute to the build-up of a five-division corps in 75 days . Internal to the APS, variously configured force modules have been designed to provide operational flexibility. The 16 existing APS ships currently operate between Southwest Asia and Korea.

The MRS additionally acknowledged the validity of the Marine Corps Maritime Prepositioning Force Enhancement (MPF[E]) program. This program increases the flexibility of MPF employment while decreasing the strategic airlift necessary to support operations. MPF(E) will add an additional ship to each MPSron. This ship will be loaded with an expeditionary airfield, fleet hospital, heavy engineer support equipment, and joint task force infrastructure

equipment.[10] The first of these ships is expected to enter service in FY00.

Maritime prepositioning offers more than just another logistics option. Service roles and missions must remain the relevant criteria when considering MPF versus APS. Both the Army and the Marine Corps prepositioning programs are necessary and complementary. Each enabling force is deployable, versatile, lethal, and sustainable. APS is designed to minimize early risk and to facilitate the rapid build-up of a five-division corps to fight sustained land combat. On the other hand, MPF assists the Marine's expeditionary role in support of global crisis response. The strategic capabilities provided by both programs are integral to our NMS.

TRANSITION

To date, the MPF concept and its operational evolution have proven extremely effective as a deterrent and in crisis response. Specified improvements in MPF capabilities achieved through the ongoing enhancement program will keep MPF relevant and capable for the near term. However, we must now once again examine the overall MPF concept and consider its relevance and potential contribution to the force of 2010. What about tomorrow and the day after tomorrow? General Krulak, Commandant of the Marine Corps, recalls Desert Storm: He offloaded 40,000 short tons of ammunition on a pier at the Port of Jubail. He recently stated, "That was dangerous then, and let me tell you, we'd never get

away with that now."[11] The message is clear. Yesterday is gone forever. In the future, we cannot assume access to modern ports and airfields in the Area of Operations, nor can we rely on extended time to project and build combat power ashore.

Many fora have described in varying terms and depth the impact of the evolving chaotic strategic environment. Volatile, uncertain, complex and ambiguous (VUCA) are the common umbrella descriptions. In order for our future conventional forces to be effective in this environment, the National Defense Panel suggests increased emphasis be on decreasing the logistics footprint, while increasing the mobility, speed, and operational range of those forces.[12]

A greater proportion of tomorrow's force will be stationed in the continental United States. Thus, strategic agility and power projection will take on greater critical importance as strategic concepts in support of the NMS of 2010.

Strategic agility provides for the timely concentration, employment, and sustainment of US military power anywhere at our own initiative.[13] Additionally, strategic agility enables our armed forces to conduct multiple missions simultaneously in geographically separated regions. Power projection provides the ability to rapidly deploy and sustain US forces in and from multiple locations without constraint. Both agility and power projection concepts, directly influenced by strategic mobility

options, will enable our forces to respond quickly anywhere in the world. Both are warfighting capabilities.

The Chairman of the Joint Chiefs of Staff recently published Joint Vision 2010 (JV2010) in order to create a focused effort in the combat development arena. General Shalikashvili declared that "Joint Vision 2010 provides an operationally based template for the evolution of the Armed Forces for a challenging and uncertain future."[14] The Son of MPF (MPF future or MPF 2010) provides a crucial capability in support of power projection and strategic agility only if the MPF operational concept remains relevant. The force of 2010 is in development today. Technology is changing warfare and enabling formulation of new operational concepts. The Son of MPF needs to support the operational concepts delineated in JV 2010. Operational concepts articulated in JV 2101 include: dominant maneuver, precision engagement, full dimensional protection, and focused logistics.[15]

The Naval Service embraced JV2010 guidance and set a course for the Navy and Marine Corps. ***Forward...From the Sea*** presents a common vision for the future: Naval forces will focus on the capability to exert influence in the littoral regions of the world--those areas adjacent to the oceans and seas that are within direct control of and are vulnerable to the striking power of sea-based forces. ***Forward...From the Sea*** reinforces the concept of Naval Expeditionary Forces (NEF).

NEFs include forward-deployed Navy and Marine units as well as those forces that can deliver additional combat power--multiple Carrier Battle Groups, Amphibious Ready Groups with embarked Marine Expeditionary Units, and the forces associated with the MPF.[16] How effectively these forces are employed in the future will be determined by how well we prepare today.

Operational Maneuver from the Sea (OMFTS) provides the direction for developing tomorrow's Marine Corps. OMFTS is a concept for projecting naval power ashore. This core concept will assist in the development and evolution of future force structure, training, doctrine, and equipment requirements. Maneuver conceptualizes the movement of forces relative to the enemy to gain an advantage. OMFTS is designed to provide this advantage in time and space by generating overwhelming tempo and momentum. OMFTS maneuver, focused on operational objectives, is further designed to pit strength against weakness, while leveraging deception, speed, and flexibility.

OMFTS makes extensive use of the sea as a means of gaining advantage. While providing an avenue for friendly forces, the sea simultaneously presents a barrier to the enemy.[17] The OMFTS concept seeks to deliver decisive force directly to an objective by capitalizing on the supporting concepts of ship-to-objective movement and sea-based logistics. Ship-to-objective movement focuses on the use of a continuous battlespace from the amphibious force through to an objective, achieving the

objective, and returning to the amphibious force.[18] No longer will NEFs execute the classic amphibious assault, which required an extensive logistics build-up ashore. This lodgment, previously a prerequisite to carrying out subsequent operations, used to require suitable terrain, a great deal of time to build up, and constrained operational flexibility. The amphibious force was extremely vulnerable to attack, and it often paid a very high price for its successes because it met with entrenched, formidable defenses. Those days are gone. The degree to which the "Son of MPF" supports sea-basing and ship-to-objective movement will ultimately determine the success of OMFTS.

FUTURE MPF CAPABILITIES

MPF, in some capacity, will contribute to the NMS of 2010. The extent of that contribution will be decided in the near term as we incorporate innovation and technology into future operational concepts. Numerous studies, wargames, and experiments have generated myriad MPF analyses. Many capabilities and opportunities associated with these various analyses have been incorporated in the Marine Corps concept paper ***MPF 2010 and Beyond.*** This document examines the pillars of future MPF operations: force closure, amphibious task force integration, indefinite sustainment, and reconstitution and redeployment.

MPF 2010 and Beyond declares "Force closure will provide for the at-sea arrival and assembly of the MPF, eliminating the

requirement for access to secure ports and airfields."[19] Marines will deploy by a combination of surface and air transport to meet maritime prepositioning platforms while they are underway and enroute to the objective area. This will require shipboard billeting for MPF units. While enroute, selected gear can be reconfigured if necessary, and personnel and equipment can be prepared to arrive in the objective area "combat ready."

Through amphibious task force (ATF) integration, the MPF will be capable of rapidly reinforcing the assault echelon of the ATF. To achieve this integration, MPF ships will be designed to allow selective offload of combat equipment. Moreover, these multi-purpose ships must be able to provide for the tactical employment of assault support aircraft, surface assault craft, and advanced amphibious assault vehicles. Essential to true MPF/ATF integration is information flow --the compatible communications architecture which will support requisite command and control functions. The "Son of MPF" still will not have a forcible entry capability, but it will have the capacity to reinforce the assault. Something it cannot do today.

The OMFTS concept of sea-basing or sea-based logistics allows, in theory, the capability of indefinite sustainment. Resupply of the sea-base, by surface or air, is possible from CONUS, forward-bases, or via in-theater logistics agencies. The MPF sea-base will be the "distribution center." Sustainment of forces may additionally include aviation logistics support ships,

hospital ships, and offshore petroleum and/or water distribution systems.[20]

Once a mission is completed, MPF reconstitution and redeployment should be much more timely than today. The estimated backload time of today's MPF MEF(FWD) is approximately 30 days. A future smaller force, employing the concept of sea-basing, will minimize the logistics footprint ashore. Without the requirement for extensive retrograde, tomorrow's MPF MAGTF will be able to respond to follow-on missions much earlier than previously possible.

To better define future MPF requirements, the initial MPF 2010 concept was wargamed at the Marine Corps Combat Development Command (MCCDC) in Quantico, Virginia, during June 1997. The purpose of the game was to refine operational and functional concepts, as well as to identify and explore associated MPF requirements. This seminar wargame employed the MPF and applied OMFTS in three different scenarios. The varied operations consisted of a NEO with an early reinforcement, an amphibious assault with subsequent operations ashore, and a humanitarian assistance operation. These scenarios depicted possible MPF taskings across the "spectrum of conflict." The game was structured to exercise, in varying degrees, the MPF's characteristics of fast deployment, reinforcement, and sustained sea-basing. Specific details regarding a most likely scenario or most demanding scenario were not addressed. The goal of this

wargame was to identify and bound significant capabilities required for MPF concept execution.[21]

Participants successfully achieved this goal by identifying "critical capabilities" as well as several capabilities deemed important, "but not vital." This relative prioritization, qualitatively determined by subject matter experts, is essential for refinement of any concept. This process made the first cut in distinguishing mission essential items from nice-to-have items. Although not exhaustive, and in no order of priority, the following list of capabilities is representative of wargame output consolidated across the three scenarios.[22]

Critical Capabilities

-Provide sea-based logistics for the MPF MAGTF.
-Deploy, employ, sustain, regenerate, and reconstitute forces from a sea base.
-Conduct arrival and assembly operations afloat.
-Command and control MAGTF operations from a sea-base.
-Selectively off-load resources.
-Receive and transfer resources via air systems.
-Receive and transfer resources via surface systems.
-Provide combat-ready MAGTF at the offload.
-Maneuver from ship to objective.
-Transfer equipment, including major end items, from MPS to amphibious ships under way.

Additionally, the following capabilities were deemed important but not vital: launch and recover large fixed wing aircraft, maintain an ability to self-defend, regenerate equipment used both by the MPF and ATF.[23] Given the basic MPF concept and the associated capabilities generated from the MCCDC

wargame, several Son of MPF alternatives can be developed and then assessed for their relative utility.

ALTERNATIVES

The Son of MPF will not be one ship, but some combination of Marine forces and MPS ships. The exact size of employed forces will remain mission-dependent. Force size could, on occasion, approach the MEF(FWD) range of 17,600 personnel. In 2010, we may have smaller sized unit packages which could require even more organic mobility than today's force. While it may physically look different, the MAGTF will most likely still retain the functional relationships and composition of a Command Element, Ground Combat Element, Aviation Combat Element, and a Combat Service Support Group. As an MPF alternative "integrates" with the ATF, it is assumed that civilian manned MPS ships will not be restrained from entering a combat environment. Review of the MPF concept and many associated capabilities, yields several alternatives.

At the **low end**, MPF squadrons could simply be replaced by today's APS type ships. These platforms are designated **large, medium-speed, roll on/roll off (RO/RO) or (LMSR) ships.** At the **high end** is an MPF squadron variant based on the **Mobile Offshore Base (MOB)** concept. This alternative takes advantage of emerging technologies which allow for the deployment of several individual floating modules (or puzzle pieces) which are joined to form one

large sea-base capable of receiving strategic airlift. The **intermediate alternative** offers a combination of ships which possesses the characteristics articulated in the MPF concept and accommodates the critical capabilities addressed in the wargame. A fourth alternative is an aggregation of two other options. The **aggregation alternative** would provide one MOB capable squadron and two intermediate option squadrons.

These four alternatives have distinct operational advantages and disadvantages, inherent in their organic capability to support various levels of force closure, amphibious task force integration, indefinite sustainment, and reconstitution and redeployment. The essential discriminating capabilities are surface and air transportation interface, capacity to accommodate personnel, and overall utility across the spectrum of conflict.

Enhanced replacement of current capability does not achieve <u>any</u> measure of the enhanced capability desired in the Son of MPF. This option merely delivers more of the same. It does not enable Marines to arrive and assemble at sea. The MPF will still be dependent on host nation support to ensure access to ports and airfields in the operating area. ATF integration will be limited to the reinforcement concept practiced today. OMFTS tenants of sea-based logistics and ship-to-objective-maneuver are not achievable. In turn, reconstitution time and effort will remain significant since sea-basing is not available. The estimated cost to procure new RO/ROs is approximately $309 million per

ship. Additionally, the associated operations and support costs are estimated at $14.2 million per ship per year.[24] This option provides limited flexibility and marginal value added to both force power projection as well as strategic agility.

The MOB possesses a tremendous potential which achieves all of the critical capabilities, along with those important, but not vital, attributes of the Son of MPF. MOB designs today range from six or more floating sections, each approximately 500 feet long, which when assembled create a base 3000-5000 feet long. This sea base is large and capable. Its individual section size and configuration, limits its transit speeds to 7-15 knots compared to the other alternatives 24 knots.[25] The time required to assemble this platform would delay the MPF's ability to rapidly integrate combat-ready forces with the ATF upon the MOB arrival in the operating area. However, once assembled, this alternative is capable of accommodating the arrival, assembly and basing of the entire MPF. This includes arrival via strategic airlift (C-17, C-130), rotary wing (including the MV-22), and tactical fixed wing. Surface transportation, to include LCAC interface, is fully satisfied. The MOB could potentially accommodate 17,000 personnel.

While engineering designs claim the MOB is technologically feasible, there will be substantial costs in time and money, for its development. One 40-year life-cycle cost estimate of a 3000 foot long, six-module MOB system is $2.7 billion.[26] While

another estimate associated with just the construction of a similar MOB exceeds $7.0 billion. The affordability and feasibility of this option must be carefully considered. The significant capability and cost associated with a MOB alternative will impact the basic MPSron prepositioning concept. Given fiscal realities, three squadrons of MOB type MPSrons are not affordable.

The aggregation alternative, one MOB and two less capable squadrons, remains capable and is more affordable. This highly capable MOB platform supports the OMFTS concept. While highly capable, it is also an extremely high value, low density option. By default, it becomes a critical vulnerability. Power projection is achieved, yet strategic agility may be limited, because the MOB may not be utilized across the spectrum of conflict. The MOB may possess too much capability for the more frequent smaller scale contingencies, and its vulnerability is significant in major theater war (MTW) scenarios. While the MOB may provide overwhelming value added for a specific scenario, a one MOB alternative will contribute nothing to the second MRC in our current two MTW strategy.

The intermediate alternative's shipping is capable of supporting rotary wing (including MV-22) and VSTOL aircraft. Surface transportation, LCACs and AAAVs are accommodated. At-sea arrival of the MPF, less some fixed wing aviation, would be accomplished via today's intermediate staging base concept. The

fixed wing element of the ACE would be required to shore-base. This scheme of force closure allows for the enroute arrival and assembly of forces. The MPF MAGTF, spread over several platforms, would be capable of arriving in the operating area with 13,000 combat ready Marines--able to integrate with the ATF. OMFTS tenets are achieved. Sea-based sustainability is linked via surface and air resupply. A minimal shore-based footprint enhances expedient reconstitution and redeployment.

Technology will directly contribute to the ship design, the size of the force, and its associated equipment. Relative to the MOB concept, this technology is both more feasible and more affordable. While cost estimates are not currently available, associated costs will correlate directly to relative capability. Global MPSron prepositioning can more likely be sustained and operational flexibility enhanced via this capable alternative.

CONCLUSIONS

Our NSS is designed to shape, respond, and prepare. Key strategic concepts that underpin the supporting NMS are power projection and strategic agility. Maritime prepositioning is an integral element of our strategic mobility and its potential contribution to the evolving force of tomorrow proves to be even more relevant than today's.

As the Marine Corps continues to refine OMFTS, the operational flexibility and force protection attributes of MPF guarantee a Son of MPF. What that evolved MPF will look like is

not yet certain. However, conceptual development and wargaming have provided initial direction to discern the capabilities it needs to possess.

The operational advantages and disadvantages of each alternative must be assessed as strategic decisions are formulated. Value added and associated costs, relative to both NMS and operational concepts, must be addressed in any consideration of ends, ways, and, means. Of the four alternatives presented, I consider the "intermediate alternative" the best option based on its utility, feasibility and affordability. Additionally, this option provides the best combination of power projection and strategic agility

The Son of MPF must be able to deliver the following: ATF integration, selective offload, surface and aviation interface, arrival and assembly at sea, delivery of combat-ready forces, command and control integration, and sea-basing capacity. Myriad alternatives can be designed to accommodate these capabilities and more.

This study describes four generic packages ranging from replacement RO/ROs to MOBs, and recommends an intermediate alternative--a combination of ships which would fulfill the identified MPF requirements.

In our NMS there is certainly potential for the MOB concept, but not as "the" follow-on for MPF. The NDP recommends consideration of sea-based MOBs to provide access in situations

where forward bases are unavailable or where prepositioned forces are at risk.[27] This forward-basing type MOB concept would complement force power projection but would definitely not satisfy the strategic agility inherent in the Son of MPF concept.

RECOMMENDATIONS

JV2010 is the conceptual template. In broad terms it has provided the common direction for our Services to develop their operational concepts, requirements and programs. The tremendous import of strategic mobility to the future joint warfight demands we get it right. The MRS provides an adequate point of departure. The changing balance of overseas basing, forward presence and prepositioning of US forces and equipment must again be considered collectively to ensure Service operational concepts remain relevant. A new Mobility Requirements Study should be initiated, with Service participation, incorporating the emerging operational concepts of JV2010. Power projection and strategic agility are total force requirements directly dependent on the contribution and integration of individual Service capabilities.

The Marine Corps will continue to refine OMFTS. Wargaming, modeling and simulation will support further concept development within the Navy and Marine Corps. However, it is essential the MPF future concept be exercised in joint wargames and eventually in various Warfighting Laboratory experiments. The Son of MPF has the potential to make a tremendous contribution to our NMS and combat readiness. The success of Naval Expeditionary Forces

in the 21st century will increasingly be linked to the improved power projection, operational flexibility, sustainability and force protection provided by the Son of MPF.

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ENDNOTES

[1] White House, A National Security Strategy for a New Century, (Washington DC: The White House, May 1997), pg.i.

[2] Cohen, William S., Report of the Quadrennial Defense Review, (Washington DC, May 1997), pg.7.

[3] The National Defense Panel, Transforming Defense National Security in the 21st Century, Report of the National Defense Panel, (Washington DC, December 1997), pg.ii.

[4] Murray, Williamson, "A Climate for Innovation", Marine Corps Gazette, Vol. 82 No. 1, January 1998, pg.46.

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