The Global Maritime Partnership Initiative
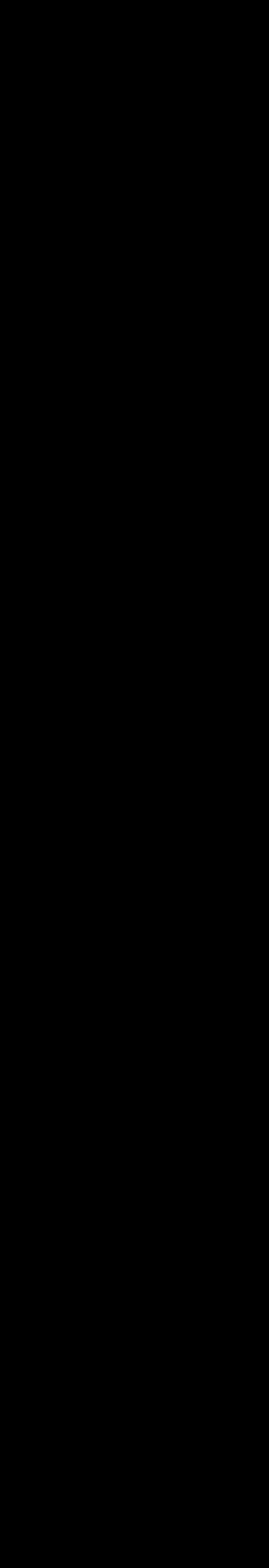
**Implications for the
Royal Australian Navy**

Chris Rahman

SEA POWER CENTRE - AUSTRALIA

THE GLOBAL MARITIME PARTNERSHIP INITIATIVE

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Contents

Abbreviations

ABCA	Australia, Britain, Canada and America [group]
AIS	Automatic Identification System
APEC	Asia Pacific Economic Cooperation
ARF	ASEAN Regional Forum
ATS	Automated Targeting System
BPC	Border Protection Command
C4I	Command, Control, Communications, Computers and Intelligence
CARAT	Cooperation Afloat Readiness and Training
CENTRIXS	Combined Enterprise Regional Information Exchange System
CMFP	Cooperative Maritime Forces Pacific
CNO	Chief of Naval Operations
COP	Common Operational Picture
COTS	commercial-off-the-shelf
COWAN	Coalition Wide Area Network
CSCAP	Council for Security Cooperation in the Asia Pacific
CTF	Combined Task Force
DHS	Department of Homeland Security
Equasis	Electronic Quality Ship Information System
FPDA	Five Power Defence Arrangements
GCTF	Global Counterterrorism Task Force
GIG	Global Information Grid
grt	gross registered tons
IMO	International Maritime Organization
ISPS Code	International Ship and Port Facility Security Code
ISR	Intelligence, Surveillance and Reconnaissance
IUU	Illegal, Unreported and Unregulated [fishing]
LRIT	Long-range Identification and Tracking
MALSINDO	Malaysia, Singapore and Indonesia [coordinated patrols]

MDA	Maritime Domain Awareness
MEH	Marine Electronic Highway
MIC	Multinational Interoperability Council
MIED	Maritime Information Exchange Directory
MNIS	Multinational Information Sharing [Program]
MSSIS	Maritime Safety and Security Information System
NETWARCOM	Naval Network Warfare Command
NOC	*Naval Operations Concept*
NSMS	*National Strategy for Maritime Security*
NSP	*Navy Strategic Plan*
OPV	Offshore Patrol Vessel
PSI	Proliferation Security Initiative
QDR	*Quadrennial Defense Review*
RAN	Royal Australian Navy
ReCAAP	Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia
ReMIX	Regional Maritime Information Exchange
RFID	Radio Frequency Identification
RIMPAC	Rim of the Pacific [exercise]
RMSI	Regional Maritime Security Initiative
SEACAT	Southeast Asia Cooperation Against Terrorism
SIPRNET	Secret Internet Protocol Router Network
SLOC	Sea Lines of Communication
SMIS	Strategic Maritime Information System
SOLAS	Safety of Life at Sea [Convention]
SOSUS	Sound Surveillance System
SPAWAR	Space and Naval Warfare Systems Command
TTPs	Tactics, Techniques and Procedures
TTCP	The Technical Cooperation Program
UAV	Unmanned Aerial Vehicle
USN	United States Navy

USCENTCOM	US Central Command
USSOUTHCOM	US Southern Command
VMS	Vessel Monitoring Systems
VoSIP	Voice over Secure Internet Protocol
V-RMTC	Virtual Regional Maritime Traffic Centre
VTIS	Vessel Traffic Information System
WMD	Weapons of Mass Destruction
WPNS	Western Pacific Naval Symposium

About the Author

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Acknowledgements

Introduction

I'm after that proverbial 1000 ship Navy - a fleet-in-being, if you will – comprised of all freedom-loving nations, standing watch over the seas, standing watch over each other.[1]

Admiral Mike Mullen, USN

In August 2005 the US Navy's then Chief of Naval Operations, Admiral Mike Mullen, introduced a new concept for international naval and maritime cooperation to an audience at the US Naval War College: the '1000-ship Navy'.[2] In November 2006, the Chief of the Royal Australian Navy (RAN), Vice Admiral Russ Shalders, publicly confirmed that the RAN would adopt the concept.[3]

Because the concept remains relatively new and underdeveloped, it is important to ascertain, in the Australian, regional and global contexts, what the implications of the 1000-ship Navy might be for maritime security and naval cooperation. An initial point of resistance from some quarters was the name, which conjured up visions of an American-controlled naval fleet attempting to dominate the global maritime domain. To allay such concerns, the US Navy (USN) renamed the concept the Global Maritime Partnership initiative, whilst the term Global Maritime Network has also been employed. Despite these modifications, the '1000-ship Navy' label has persisted, including continued use in USN strategy and policy documents. This paper thus uses the three terms interchangeably. It is divided into five chapters to address the following questions:

I.   What is the 1000-ship Navy?

II.   How does it fit within the USN's policy and strategy framework?

III.   How might it work in practice?

IV.   What are the implications for international naval cooperation?

V.   What are the implications for Australia and the Royal Australian Navy?

The 1000-ship Navy Concept

In establishing the initial case for his 'proverbial 1000-ship Navy', Admiral Mullen explicated a vision for sea power in the 21st century that would broaden the focus of the US Navy (USN) somewhat; from performing roles connected primarily to deterrence and warfighting, to one that also emphasises the protection of shipping and safety of sea lanes, the maintenance of a stable and lawful maritime domain and prosecution of the fight against transnational terrorist groups, including in the littoral, and the ability to influence events ashore. This vision would require the USN to rebalance its force structure to be able 'to face the challenges of our age', which he argued comprise 'Piracy, drug smuggling, transport of weapons of mass destruction over the high seas, exploitation of economic rights, organized crime, and … terrorism'. He summed up his vision with the motherhood statement that the USN 'needs tools that are not only instruments of war, but implements of peace - to become a strong partner for a stable global community'.[4]

Beyond adaptation by the USN itself to the new security environment, Mullen envisaged that the goal of peace and order throughout the world's maritime domain would require new levels of naval and maritime cooperation, in part building on existing concepts such as the Proliferation Security Initiative (PSI) and US Pacific Command's Regional Maritime Security Initiative (RMSI), and bound together by new technologies for maritime domain awareness (MDA), command, control and communications: the 1000-ship Navy.[5] These goals essentially aspire to a system for ensuring the maintenance, or enforcement, of a condition of maritime peace and stability that Geoffrey Till has described at length as 'good order at sea'.[6]

Admiral Mullen expanded on his concept for a global maritime network of like-minded states to secure the global maritime environment at the 17th International Seapower Symposium in September 2005, which became the initiative's formal diplomatic launch pad. In his address Mullen argued that the 'most serious threat' faced by all states was that of 'irregular and Unrestricted Warfare - warfare with no rules, with nothing forbidden'. These threats were deemed to be of particular significance in certain regions of the maritime world labelled the 'ungoverned and under-governed parts of the maritime domain', denoting both coastal areas and the high seas.[7]

The threat environment being described is clearly one dominated by the global menace of the 'new terrorism', as epitomised by Al Qaeda and its ideological fellow travellers, and roguish state actors willing to conduct asymmetric and unconventional, and 'unrestricted', albeit not necessarily unlimited, forms of warfare against the United States (US) and the US-led world order. The term 'unrestricted warfare' is an implicit reference to the title of a book written by two senior colonels from China's People's

Liberation Army, which sets out the asymmetric military and non-military tactics of a grand strategy with which to combat American dominance, whether in war or in periods of so-called 'peace'.[8]

Mullen's view of the threat environment thus makes significant assumptions about the character of current and future threats and challenges, and forms of warfare, deemed most likely to be encountered by the USN over the medium term. That threat environment supposedly will be dominated by 'non-traditional' security factors and irregular warfare, whether conducted by states or non-state foes, rather than the reputedly more familiar forms of conventional conflict against similarly equipped states.[9]

The 1000-ship Navy concept was further elucidated by two of Admiral Mullen's senior staff in a short article published in November 2005.[10] The article identified the current salience of transnational threats to international security in a globalised world characterised by increasing economic and security interdependence. The authors argue that a purported growth in maritime 'lawlessness' resulting from the cumulative effect of threats to good order at sea posed by criminal activity, terrorism and weapons proliferation may seriously impact the security and economic well-being of all states, which increasingly are interconnected by their reliance on a largely sea-based international trading system. Given the extent of the maritime domain and the range of challenges to order, as well as the political sensitivities and legal limitations posed by the reality of national sovereignty and sovereign rights either extant or claimed at sea, it recognises that the problem is too large and complex for the USN alone to combat. In this view the size and complexity of the problem thus necessitates the need for enhanced international cooperation, although it may be viewed by some as a 'declinist' argument: that is, being symptomatic of America's declining ability to protect the international system it notionally leads.[11]

One of the truly innovative aspects of the proposed global maritime security network outlined in the November 2005 article is its intention to incorporate into the network not only the assets of navies and other government agencies but also those of the private sector - the international maritime industry. The 1000-ship Navy network would be built around information from the sensors of all of those national and private industry seaborne assets to enhance maritime domain awareness. The concept thus would pursue two objectives: enhanced maritime domain awareness and improved response capacity. Finally, the article explained that the network would be able to 'export' maritime security and security assistance to willing countries and regions where there exist capacity shortfalls to deal with threats to order at sea.

Admiral Mullen further expounded the developing concept to a Royal United Services Institute conference in December 2005, when he made the somewhat startling claim that not only was good order at sea under increasing threat but that a 'nexus of piracy, terrorism, and exploitation of the maritime domain for illegal purposes' had passed

a new threshold, or 'tipping point', which potentially could 'change the world'.[12] The supposed tipping point for Mullen was the unsuccessful November 2005 attack on the cruise ship *Seabourn Spirit* by pirates off the southern coast of Somalia using two 25-foot boats and armed with rocket-propelled grenades and assault rifles. That the attack took place some 100 miles offshore and employed such a significant arsenal certainly was unusual,[13] but Mullen's assertion that this represented a significant discontinuity in maritime security analogous to the momentous strategic shocks of Pearl Harbor in 1941 and 11 September 2001 (9/11) surely is a gross exaggeration. Indeed, to compare the *Seabourn Spirit* incident to 9/11, which resulted in around 3000 civilian deaths, significant economic disruption and the launching of a global war (of sorts) against militant Islam would seem entirely inappropriate; yet even the attacks of 9/11 and the consequent, ongoing conflict pales into relative insignificance compared to the genuinely world-changing consequences of Japan's sneak attack on the United States. Rather, it would seem that the dangers in the waters adjacent to Somalia are more a reflection of the anarchy reigning within that country itself than being portentous of a new 'tipping point' for security in the wider maritime domain.

Mullen explicitly acknowledged the PSI as a preferred model for cooperation, noting that it was an informal and voluntary arrangement amongst likeminded states, with no formal organisation, staff or support structure. This no doubt also reflects the Bush Administration's preference for these types of informal 'coalitions of the willing' rather than having to deal with the inherent constraints and unwieldy nature of formal treaty agreements and international organisations, which often are incapable of acting in a timely fashion, if at all. The Administration itself has spruiked the PSI as a model for future security cooperation - or 'results-oriented partnerships' – in its current *National Security Strategy*:

> These partnerships emphasize international cooperation, not international bureaucracy. They rely on voluntary adherence rather than binding treaties. They are oriented towards action and results rather than legislation or rule-making.[14]

Perhaps influenced by the PSI's Statement of Interdiction Principles, Mullen offered his own set of ten 'First Principles' for the Global Maritime Network in his December 2005 speech, set out below.

Mullen's First Principles

1. a recognition of the continued primacy of national sovereignty

2. many of the problems that are challenging good order at sea can be solved when States respond cooperatively where they share a common interest

3. the scope of the network is limited to the maritime domain, from ports to the high seas

4. the network's 'fundamental building block' will be the extant capabilities of individual states

5. the network is not limited to navies and will include all relevant national government agencies and maritime forces, and private industry players

6. states with the ability to export maritime security or security assistance should be willing to do so

7. states which require maritime security assistance should be prepared to request it of those willing and able to provide it

8. states must develop regional networks for maritime security as the key to constructing an eventual Global Maritime Network

9. to be effective, the network needs to be able to share information amongst its members, which preferably should be of an unclassified nature to overcome security concerns. Such information should include 'commercial ship characteristics, accurate cargo manifests, merchant ship crew lists, sailing times, destinations, and current ship locations'

10. the security situation in the global maritime domain requires that efforts are initiated as soon as possible to strengthen national maritime security capacities, build regional cooperation and link regional arrangements to build the global network.

To function effectively, the 1000-ship Navy will not only require high levels of international political support to foster the necessary levels of cooperation, but also will be heavily technology dependent. Mullen stressed this aspect in his address to the Western Pacific Naval Symposium (WPNS) in October 2006, stating that 'Technology and information technology, in particular, may very well be the single largest contributor to our maritime security in the future'. According to Mullen, the 'promise of significant technological progress', including web-enabled MDA, is itself a 'compelling reason to cooperate' for maritime security.[15]

What the Initiative Is, and What It Is Not

Tentatively, then, the Global Maritime Partnership initiative represents both less, and more, than meets the eye. In some respects, it represents little more than a continuation of post-Cold War proposals by many policymakers, naval operators and commentators for increased naval and maritime security cooperation, albeit on a grander scale. In this respect, the concept very much represents an evolutionary approach to maritime security, whilst at the same time reflecting the greater sense of urgency of the post-2001 security environment.

Usually, those earlier proposals were regionally based. The Asia-Pacific region, characterised by its maritime geography and beset by maritime sources of international dispute, has witnessed a high level of activity promoting maritime security cooperation at the official, inter-governmental level, such as in the ASEAN Regional Forum (ARF) and the Asia Pacific Economic Cooperation (APEC) forum;[16] at the 'Track II' unofficial level of supporting cooperative activity, such as the Council for Security Cooperation in the Asia Pacific (CSCAP);[17] and in naval forums, such as the multilateral Western Pacific Naval Symposium.[18] The United States has also been active in the region, promoting the RMSI and conducting other, more US-centric forms of naval cooperation.[19]

The USN's 1000-ship Navy concept can be thought of as a continuation of these regional processes and initiatives, only extrapolated to encompass maritime security on a truly global basis. Indeed, it is sometimes implied, rightly or wrongly, that the announcement of the RMSI in 2003 and subsequent pronouncements by US Pacific Command spurred Malaysia and Indonesia to take security in the Malacca and Singapore straits more seriously. In this manner of thinking, the launch of the MALSINDO coordinated patrols of the straits in July 2004 and the subsequent launch of the Eyes-in-the-Sky aerial patrols may have been a response to the 'threat' of American intervention in the area. If that is a view widely shared within the USN, it is possible that the intent of the 1000-ship Navy is simply to spur other states to improve maritime security globally. Nonetheless, the fact that the concept is being fully integrated into USN strategy and planning documents suggests a more ambitious scheme which needs to be taken at face value.

On the other hand, however, beyond the promotion of naval cooperation, there are aspects to the concept which are potentially groundbreaking. The intent to develop the MDA picture available to participating states into a functionally global, comprehensive system of near-real time data collection, analysis and exchange on merchant ship movements and related information on the maritime domain, is both highly ambitious and significant. Of course, MDA has been a feature of other, regional, proposals for some time. The RMSI unsurprisingly has a heavy emphasis on this factor, and other proposals for regional cooperation also have often focused on the importance of maritime information and its exchange. For example, in the early to mid 1990s the RAN sponsored the development of an unclassified database which would have

integrated a wide range of information on Southeast Asian seas, able to be accessed by regional states: the Strategic Maritime Information System (SMIS).[20] Although SMIS itself was never completed, the American conception of MDA can be thought of as an SMIS on steroids, harnessing the great leaps in information technology and communications systems made since the time of SMIS and the vast technological and financial resources which the US can bring to bear on the problem, and applied not just to a single geographical sub-region but the entire global maritime domain.

It has been made sufficiently clear what the 1000-ship Navy concept is not intended to be: a global naval alliance consisting of a nominal fleet of 1000 ships under American leadership. The coining of the term '1000-ship Navy' was probably a mistake in this regard and, despite attempts at relabelling, the moniker has become strongly affixed. The intent of the term itself is largely metaphorical,[21] and somewhat misleading: as Admiral Mullen's fifth 'First Principle' states, the concept is about more than just navies. Yet by employing 'navy' in its title the initiative gives the impression that it is solely a military scheme, when in fact it is not. That issue of perception will pose problems for certain states in important maritime regions, such as Southeast Asia, and will likely mean that such states do not publicly join the initiative, even if they cooperate with it. That pattern of behaviour has already been evident in the PSI.

Sea Lines of Communication Security for the Post-9/11 Era

In many ways the 1000-ship Navy concept is a reflection of the changing conditions for the security of shipping in a time of a constant terrorist threat. The security of shipping itself indeed is the very essence of the idea of securing the sea lines of communication (SLOCs): the actual sea lanes themselves are after all just stretches of empty ocean.[22] In times of (conventional) war, and the period of the Cold War, SLOC security was solely a military task to defend allied shipping against attack from rival military forces. The primary responsibility for this task rested with navies.

However, the character of SLOC security has in effect been redefined by the exigencies of the current circumstances in which not only shipping but the entire maritime transportation system is at risk from the spectre of terrorism; and that system also could be exploited by terrorists to conduct catastrophic attacks against high-value targets on land. The threat to shipping is now more likely to be posed by, for example, a small boat attack close to shore or a weapon smuggled in a ship's cargo, than a conventional attack on the open ocean.[23] The implication of the changed character of SLOC protection is that navies, for the time being, have lost their monopoly on securing the world's sea lanes. SLOC security must therefore now involve a plethora of other protective agencies, such as coast guards, marine police forces and other law enforcement agencies, customs organisations, immigration departments, intelligence

agencies, port authorities and other commercial players throughout the maritime sector and international supply chains. The 1000-ship Navy should be viewed in this context as an attempt to integrate the capabilities of all types of agencies that contribute to the security of shipping on an international, cooperative basis, as reflected in the following statement by the US Secretary of the Navy:

> The responsibility for Global Maritime Security lies with many departments, agencies, and organizations across the spectrum of our government, international partners, and industry. Each of these stakeholders bring a part of the solution, and taking the lead in establishing a global capability from those parts is one of the single most important new steps of the Department of the Navy.[24]

From this perspective the 1000-ship Navy is just one of a number of different strategies that the US has employed to strengthen the overall security of the international maritime system in the post-9/11 world - along with a host of new regulatory measures which have been pursued both on a unilateral basis, and multilaterally through international groups such as the International Maritime Organization (IMO). Increasingly, these different strategies in combination are beginning to form a globally integrated protective maritime security system.[25]

Idealism and the 1000-ship Navy

Admiral Mullen's pronouncements on the Global Maritime Partnership initiative reflect a highly idealistic view of states' common interests at sea, and invokes the old notion of collective action noted in the epigraph to this paper, of 'all freedom-loving nations, standing watch over the seas, standing watch over each other'.[26] He has even employed the term 'collective security' in the context of the initiative.[27] However, does the 1000-ship Navy actually represent a form of collective security? And is truly collective security at sea (or even collective security in general) actually attainable?

Perhaps unfortunately, undermining both the theory and practice of collective security are performance criteria that are all but impossible to meet. That is why the use of the term 'collective security' has devolved, from the first extremely idealistic pronouncements in the interwar years and the tragic débâcle of the League of Nations, into something more akin to a populist political slogan, much like the currently popular, highly misleading - and essentially empty - term 'international community'. The characteristics that make collective security distinct from other, more traditional security systems have been identified by Richard Betts as universality and automaticity. Thus, in order to work as advertised, a collective security system must be truly

collective, with the universal and automatic participation of its members in response to aggression - the 'all for one, and one for all' principle.[28]

Participation in the 1000-ship Navy, however, is to be voluntary. As a type of informal 'coalition of the willing', whereby members would participate in instances comporting with their own national interests, it notably fails the collective security test. Rather, the initiative should be viewed more as a form of cooperative security, itself a somewhat amorphous construct characterised by its inclusiveness of membership and both military and non-military contributions to security, which does not exclude existing strategic relationships such as alliances from the system.[29] America's new joint Maritime Strategy also suffers from this terminological inaccuracy, employing both terms in aid of its message; stating that sea power must be used to promote collective security,[30] and that the Global Maritime Partnership initiative 'will serve as a catalyst for increased international interoperability in support of cooperative maritime security'.[31] The temptation to appeal to the symbolism of collective security ought to be avoided though: little kudos is likely to be won by such overselling and mislabelling.

Although the initiative is framed in such a way as to be inclusive of a wide range of threats and challenges to security in the maritime domain, it is also evident that it is driven by an overriding American concern with the threat posed by Al Qaeda and other extreme Muslim groups. The possibility that those terrorist networks might exploit the maritime transportation system, to carry our potentially catastrophic attacks on United States territory or against allies, or contribute to instability in those 'under-governed' parts of the world is real. However, that threat perception is not universally shared, placing a further potential obstacle in the path of the initiative. Some Muslim states may be especially sensitive to that motivating factor. Others will view the scheme simply as further evidence of American 'unilateralism', even though the USN has gone out of its way to promote the scheme as inclusive, voluntary and non-threatening.

The Concept as System Defence

In summary, then, the 1000-ship Navy can be thought of as an initiative to enhance the defence of the US-led international system, including globalisation and the sea-based trading system, by coopting international partners at a time in which the United States is preoccupied and overcommitted in Iraq and elsewhere around the globe.[32] There are historical antecedents for such a proposal, particularly Mahan's call for the establishment of an Anglo-American naval consortium and even wider naval cooperation around the turn of the 20th century to defend the then British-led international system of international commerce and Anglo liberalism against new threats to that order.[33] However, one abiding question hanging over the entire concept remains its assumption of global *disorder* at sea. Apart from a number of regional hot spots, it is not clear that that assumption is a reasonable appraisal of the wider maritime security situation at all. The terrorist threat, though, is real enough: the potential for catastrophic attacks

involving WMD alone mandates that responsible states give a high priority to improving SLOC security, as reformulated above for post-2001 circumstances.

A cynic might perhaps suggest also that the 1000-ship Navy concept and the new Maritime Strategy are ways to make the navy seem more relevant to the war on terrorism, thus safeguarding service funding at a time of great budget stress due to the wars in Iraq and Afghanistan and maintaining political support for programs such as the littoral combat ship.[34] Yet navies do have important roles to play, and these need to be understood by policymakers. Indeed, inasmuch as the US-led international system is by nature a 'maritime system',[35] navies and other maritime forces will always have a central role to play in safeguarding it. As the player with the greatest degree of responsibility for system defence - like Britain before it in a previous era - the United States has had to adapt to the current threat environment to ensure that the maritime system itself continues to function. The Global Maritime Partnership initiative is a potentially important element in system defence, both symbolically, as a rhetorical instrument of international outreach and cooperation, and practically, through its promotion of an improved understanding of the maritime domain and the dissemination of such information to partner states.

The USN's proposal to defend the international system thus seeks to build, firstly, new, or enhance existing, regional networks for maritime security cooperation; and, secondly, to link those regional networks into a global network. Within that framework, there are two main components to the initiative, each with its own sub-components:

1. improving maritime domain awareness

    •   increasing the number of sensors

    •   incorporating military, non-military (agency) and private sector assets

    •   networking the information

    •   sharing the information

2. enhancing the ability of states to respond to threats to good order at sea and crises in littoral areas

    •   building national enforcement and response capacity

    •   building regional enforcement and response capacities through improved cooperation.

Policy and Strategy Foundations

Existing schemes and new initiatives for naval cooperation do not provide the only context for the development of the 1000-ship Navy idea. It has also taken place within a fertile post-Cold War naval policy and strategy-making environment, one which has been built upon in the post-9/11 world by an entire new policy preoccupation with terrorism and the terrorist threats to maritime security. The following discussion places the 1000-ship Navy within that fluid environment, inclusive of both USN and national-level strategy development.

In June 2006 Admiral Mullen outlined the bare bones of a new US maritime strategy.[36] The strategy itself was released by his successor, Admiral Roughead, and his Marine Corps and Coast Guard counterparts in October 2007, becoming the first new US maritime strategy since the Reagan-era *Maritime Strategy* formulated under the leadership of then Secretary of the Navy, John Lehman.[37] The 1980s strategy became almost instantly obsolete with the end of the Cold War and the abrupt and happily peaceful demise of the Soviet Union. The USN (and US Marine Corps) instead refocused their operating concepts to the new strategic environment,[38] which was characterised by regional conflict, including limited conventional wars such as Operation DESERT STORM; internal conflict, as many parts of the former Soviet and Communist worlds began to disintegrate; and general instability, as the caution-inducing constraints of the bilateral Cold War strategic framework were shrugged off to reveal underlying tensions and longstanding political, ethnic and religious fissures in many parts of the world.

The new post-Cold War operational concepts redirected the focus of the USN: from winning and maintaining sea control in order to then launch offensive operations against the Soviet homeland, to an assumption of sea control in the absence of a peer naval competitor, which in turn allowed that naval preponderance to be used to project power into the world's littorals and across the shore to directly influence events on land with relative impunity. In so doing US maritime forces proved rather more adept at adapting to the new strategic circumstances than the other Services, especially the resistant US Army, and the maritime forces of many other states, including the NATO Europeans, whose legacy force structures proved to be less flexible and adaptable to the demands of littoral operations and power projection than those of the United States.[39]

Naval and Maritime Security Strategy Post-9/11

The following discussion describes the relationship between the Global Maritime Partnership initiative and major strategy and doctrinal documents. It demonstrates that the USN has taken an evolutionary approach to conceptual development and strategy formulation since 9/11: the 1000-ship Navy has grown logically from those developments and continues to inform the further evolution of policy and strategy. In terms of the documents surveyed, the *National Strategy for Maritime Security* represents higher level policy guidance for maritime security from a national, whole-of-government perspective, and is one of a number of national strategies directly linked to the *National Security Strategy*. The current Chief of Naval Operations describes his own 'overarching guidance' in terms of three documents:

- The Maritime Strategy creates 'a unified strategy that integrates sea power with other elements of national power, and those of our friends and allies'.

- The *Navy Strategic Plan* 'translates [the] Strategy into guidance for future Navy program development'.

- The N*aval Operations Concept* 'describes how the Navy-Marine-Corps team will fight'.[40]

And the operational principles of the *Sea Power 21* concept continue to inform USN thinking, including the *Navy Strategic Plan* and the *Naval Operations Concept*. To establish the evolutionary nature of US thinking the documents are considered chronologically.

Sea Power 21

The first restatement of US naval power for the post-9/11 era took place in October 2002 with the release of the *Sea Power 21* concept document.[41] *Sea Power 21* expanded the USN's regional focus with a new emphasis upon conducting global operations against transnational threats. These dual concerns of regional conflict and regionally focused 'rogue' states, and the threat of globally active terrorist organisations, had become the new strategic preoccupation for the United States, as set out in the *National Security Strategy* which preceded *Sea Power 21*.[42] The threat of the 'new terrorism', as epitomised by Al Qaeda, the development of weapons of mass destruction (WMD) by regional rogue states, and the potential for cooperation between such states and terrorists thus became the driving motivation for US national security policymaking. In particular, the possibility, however remote, that Al Qaeda or a similar group might successfully develop, procure or be gifted by a rogue state some form of useable WMD – especially a crude nuclear or atomic device - to attack the American homeland understandably

focused minds throughout the US national security community. The consequences of not preventing such an attack would be horrific indeed.

Sea Power 21 introduced three new operational concepts: Sea Strike, Sea Shield and Sea Basing. These concepts in turn are connected by FORCENET, which is the 'architectural framework' that intends to exploit advanced information technologies to network command and control systems, sensors, platforms, weapons and people into an integrated, network-centric force.[43] Of particular relevance to the 1000-ship Navy are aspects of Sea Shield and Sea Basing.

Sea Shield reformulates the concept of naval defence, from the defence largely of individual ships, fleets or sea lines of communication, to a more expansive concern with protecting wider national interests 'with layered global defensive power based on control of the seas, forward presence, and networked intelligence'. It seeks to 'project defensive power' into the littorals and 'deep inland' and contribute to the protection of the American homeland. Homeland defence is both a new role and one especially relevant to the issue at hand, as the 1000-ship Navy concept also is driven by a preoccupation with terrorism and other, potentially interlinked, threats of a transnational nature. The intention is that naval homeland defence capabilities will be integrated with those of other military and civilian agencies with homeland defence and homeland security responsibilities. In keeping with the idea of layered defence, the intent of *Sea Power 21* is that the forward-deployed navy would act to 'identify, track, and intercept' threats 'far seaward' of US territory, long before they could directly endanger the homeland. This would include the use of advanced radiation detection equipment by boarding parties on intercepted vessels, for example.[44]

The Sea Basing concept envisions that forward deployed naval assets will act as essentially independent bases for operations in the littoral and on land, complete with their own integrated logistics and command and control capabilities. These capabilities also can support coalition or non-coalition multilateral operations in a littoral environment, as occurred, for example, in the response to the December 2004 Indian Ocean tsunami. As will be examined further, elements of the Sea Basing concept are being developed specifically to support the regional, in-theatre, aspects of the 1000-ship Navy.

The National Strategy for Maritime Security

In September 2005 the Departments of Defense and Homeland Security released the *National Strategy for Maritime Security* (NSMS). The NSMS and its eight supporting implementation plans represent a whole-of-government planning approach to maritime security, reflecting the strategic priorities of the 2002 *National Security Strategy*. Although the NSMS identifies state, terrorist, transnational criminal, piracy,

environmental and illegal immigration threats to maritime security, clearly it is terrorism and the possible interplay between terrorists, rogue states and WMD that dominates the thinking behind the document.

The counter-terrorism priority is also reflected in the *National Strategy for Maritime Security's* strategic objectives, the first three of which are concerned with preventing terrorist attacks and other hostile acts throughout the maritime domain, protecting coastal population centres and critical infrastructure from attacks and minimising damage incurred from such an attack whilst ensuring successful recovery. The final strategic objective, safeguarding the ocean itself and its resources from illegal exploitation is treated only cursorily in comparison.[45]

It is in its five declared strategic actions that the NSMS clearly lays an important foundation for the 1000-ship Navy:

1. enhance international cooperation

2. maximise domain awareness

3. embed security into commercial practices

4. deploy layered security

5. assure continuity of the marine transportation system.[46]

The first of these actions is largely self-explanatory, and involves military and inter-agency cooperation between states, as well as engagement within international and regional organisations and security regimes. So too are the second and fifth of these actions. The integration of private industry, including the commercial maritime sector, into supply chain security has an analogous component in the 1000-ship Navy, whereby shipping companies have been invited to contribute as part of the global sensor grid, feeding information from their ships' automatic identification systems into the overall MDA picture.

Layered security, a term previously made familiar by the USN's Sea Shield concept, applies across different levels of analysis. For example, it can refer to layering security practices along the entire length of the maritime transportation chain, to all possible 'points of vulnerability'. It also means integration of security practices between the various levels of government within the US domestic jurisdiction, with the private sector, between different agencies and internationally. The physical protection of ports, ships and cargoes adds extra layers. Further layers still are provided by interdiction of suspicious materials and people all along the supply chain, and enforcement action where necessary. Layered security therefore attempts to establish preventative security measures through (usually non-military) interdiction and pre-emptive action - such as pre-screening containers in foreign ports before being loaded onto ships bound for the United States - and protection, through deterrence and defence.[47]

Also in common with the Sea Shield concept, layered security seeks to extend the reach of its maritime security aegis - in this case the physical protection of the American homeland from terrorist threats delivered via the maritime transportation system - as far from US national territory as possible. The pursuit of such a strategy should not be a surprising one for any maritime power of significance, for as Norman Friedman reminds us in the conclusion to his examination of the strategy of sea power:

> The issue is always the same. Is the sea a barrier or a highway? If seapower makes the sea a barrier, then it is a tool to promote isolationism. The argument against isolation is that some weapons, both military … and economic, can leap any barrier. It is better to use the sea as a highway, and engage potential threats as close to source as possible. That is the ultimate character of maritime strategy - for the United States, and for any other country contemplating such a strategy.[48]

Although Friedman was referring primarily to the use of naval means in a more traditional strategic context, the utility, for maritime powers, of engaging threats 'as close to source as possible' remains valid in the current security environment, in which a collaborative, joint and inter-agency approach is being pursued to negate a maritime security threat of a non-traditional nature. The new US Maritime Strategy is explicit on this point: 'Maritime forces will defend the homeland by identifying and neutralizing threats as far from our shores as possible'. This requirement is also linked to a standard doctrinal component of the application of maritime power: forward presence, both to prevent hostile acts and to 'build partnerships'.[49]

Whilst identification and neutralisation of such threats might be an obvious response to the new threat environment, it is nevertheless interesting to note how these two necessities correspond to the substantive elements of the Global Maritime Partnership initiative: identification representing the MDA component, and neutralisation the preventative enforcement element. If one were to take an entirely US-centric view of the 1000-ship Navy, by integrating the efforts of other members of the cooperative scheme, the United States can thus be seen to be adding the capabilities of their international and commercial sector partners to the layered maritime security of the US homeland.

Navy Strategic Plan

The *Navy Strategic Plan* (NSP) of May 2006 added to the strategy framework underpinning the Global Maritime Partnership initiative. It outlines three 'CNO focus areas':

1. global war on terror/irregular warfare

2. homeland security/homeland defense

3. conventional campaigns.[50]

These focus areas are consistent with, and linked to, the Force Planning Construct outlined in the 2006 *Quadrennial Defense Review* (QDR). The new priorities of defending the American homeland and prosecuting the so-called 'long war ... against violent extremists who use terrorism as their weapon of choice' were clearly elucidated by the QDR, although it perhaps overstated the significance of changes to the strategic environment when it outlined an apparent necessity to transform defence preparations from 20th to 21st century realities. This supposed discontinuity includes the downplaying of state-based threats in favour of accentuating 'non-state enemies' (such as Al Qaeda and other related terrorist groups).[51]

That same prioritisation of the irregular threat to the homeland is also apparent in the *Navy Strategic Plan*. Of particular relevance to the 1000-ship Navy, the NSP includes among the 'desired effects' that the navy can contribute to its CNO focus areas, global MDA, theatre security cooperation programs and cooperation with the US Coast Guard and other Department of Homeland Security (DHS) agencies to better prepare for joint and inter-agency responses to maritime threats to the US homeland.[52]

In regard to cooperation with the US Coast Guard, the relationship has been enhanced, at least in theory, with the reinvigoration of the National Fleet policy. Although first promulgated in 1998, the National Fleet concept had been largely moribund until the exigencies of the global campaign against extreme Islamist revolutionaries demanded closer cooperation. The renewed emphasis on the National Fleet also implicitly recognises the limitations of a downsized and overstretched USN force structure, the role and expertise of the US Coast Guard in safeguarding the United States against threats emanating from within the global maritime transportation system, and the utility of employing a non-military force to engage with countries which may be less comfortable or willing to cooperate with the US military. Thus, the National Fleet aspires to be

> A joint and interoperable maritime force ... to establish the numerical sufficiency required for effective global operations and to effectively foster and leverage regional international partnerships in order to

achieve global maritime domain awareness and maritime transportation security in the era of globalization.[53]

The Navy-Coast Guard relationship has been further bolstered by the inclusion of the latter agency as a full partner in the new Maritime Strategy. Nevertheless, although the 1000-ship Navy has been a USN initiative and despite an NSP assertion of the Navy's 'unique position' in facilitating its construction, it is somewhat surprising that the US Coast Guard has not been given a prominent role in developing and promoting the concept.[54] As a former Coast Guardsman notes, the US Coast Guard itself has many unique attributes that would be useful in operationalising the initiative.[55] In this respect the Coast Guard:

- is a law enforcement agency with powers and expertise not held by the Navy

- already has considerable responsibility for maritime homeland security and maritime transportation security, including developing MDA capabilities and implementation of international regulations such as the *International Ship and Port Facility Security* (ISPS) *Code*

- has close operational relationships with other DHS agencies involved with maritime security, such as Customs and Border Protection

- is deeply involved in international cooperation and engagement programs[56]

- as a primarily civilian rather than military organisation, it is both more closely attuned to the capability requirements and operational concerns of potential partner nation coast guard (and other civilian) agencies and many of the world's smaller navies – which function primarily as coast guards – and more politically acceptable than the USN (or other navies) in some parts of the world.

One of the tangible outcomes of closer Navy-Coast Guard cooperation for the homeland defence role is the development of a Maritime Domain Awareness Concept of Operations.[57] This is a logical step and, indeed, the USN will undoubtedly need to leverage the US Coast Guard's expertise and access to the entire range of commercial maritime supply chain data derived from the information collection capacities of various DHS agencies, if it wishes to play a significant role itself in securing the homeland from threats carried via the maritime transportation system.

The NSP summarises the now familiar case for the need for a Global Maritime Network of partner nations cooperating to face down the growing challenges to security in the global maritime domain. It also adds a financial justification, stating that the 'proactive cost of ensuring day-to-day security in the maritime domain is dramatically more affordable than the reactive costs of going to war or mounting a large-scale security operation'. This seems to ignore the fact that the context of the 'war' on terrorism was the leading driver of the concept in the first place.[58] Nevertheless, the 1000-ship Navy has clearly become a significant element of USN strategy making.

Naval Operations Concept

The *Naval Operations Concept* (NOC) of September 2006 further integrates the 1000-ship Navy into USN operational thinking, which takes pride of place, for example, in the NOC discussion of 'maritime security operations' – or, the apparent need for the 'Policing of the maritime commons'. The NOC also places importance upon security cooperation programs and civil-military operations, such as those employed for counter-insurgency and counter-terrorism, and humanitarian and civic assistance. Lastly, the NOC emphasised building cooperative partnerships – the mantra of the 1000-ship Navy again – by building up the capacity of the maritime forces of partner nations.[59] The NOC will be revised to take into account the new Maritime Strategy.[60]

The New Maritime Strategy

In October 2007 the USN, US Marine Corps and US Coast Guard released the first ever tri-Service Maritime Strategy to describe the role of joint sea power in protecting the US homeland, national interests and the extant international system: *A Cooperative Strategy for 21st Century Seapower*. It sets out the potential sources of disruption that might upset an ever more tightly connected global system whose economic linkages via trade are overwhelmingly maritime: from major power war and regional conflict to terrorism, 'lawlessness' and large scale natural disasters. Unsurprisingly, it builds upon the same set of perceptions and assumptions about the international strategic environment as earlier pronouncements on the 1000-ship Navy concept: the globalised world does not come free of negative consequences, including the spread of the disruptive political ambitions and extremist ideologies of rogue states and transnational actors, via modern technologies and employing 'a hybrid blend of traditional and irregular tactics'.[61] It also identifies the potential for the continued rapid growth of the global economy to increase the competition for natural resources, including marine resources, although it falls short of Admiral Mullen's more dramatic 2006 characterisation that globalisation is driving a competitive 'race for energy'.[62]

A Cooperative Strategy for 21st Century Seapower pays due regard to the ability of US maritime forces to prevent conventional wars through deterrence or fight them using their sea control and power projection capabilities. However, it is also clear that, consistent with the 1000-ship Navy concept, there is a growing emphasis upon conducting maritime security operations to safeguard both the homeland and the international system - including its major sea lanes and global maritime commons - from transnational terrorist and criminal threats, as well as operations in response to natural disasters and demands for humanitarian assistance. US maritime forces thus contribute

to the outer reaches of the layered security of the homeland by the persistence of their forward presence, particularly in unstable regions of the world.[63]

As befits its title and consistent with the NSMS and 1000-ship Navy, the Maritime Strategy places a strong emphasis on cooperation, not only between the three American sea Services but also with friends, allies and other partners in achieving cooperative maritime security throughout the global maritime domain, including with international organisations, the private sector, and other non-state actors.[64] The strategy thus places the Global Maritime Partnership initiative at the heart of its international partnership-building activities, which are in turn central to the current American conception of the roles of sea power in the war against transnational Islamist insurgents.

Evolution, Not Revolution

In summary, therefore, it is clear that the 1000-ship Navy concept has been the product of an evolutionary process rather than a revolutionary departure in maritime strategy and security policy making since 2001.[65] Not only has the concept grown out of pre-existing policy and strategy thinking, but it has been fully integrated into new USN concepts of operations and strategy priorities, including a prominent role in the Maritime Strategy. The underlying assumptions and strategic priorities of this thinking seem to be well established and unlikely to change in the current international circumstances, particularly Washington's preoccupation with the 'Global War on Terror'. Strategic circumstances can change rapidly, however, and it remains to be seen how resilient the new thinking would be in the event of a more traditional maritime-strategic challenge, such as a Chinese assault on Taiwan or an Iranian attempt to close or dominate the Persian Gulf region. Those types of scenarios - of state-based challenges to regional or international order – or a break down of the globalising, integrative international economic order so integral to USN thinking would thus perhaps provide the real test of the strength of the Global Maritime Partnership initiative.

The 1000-ship Navy in Practice

This chapter takes a two-pronged approach by examining the regional focus areas of the proposed global maritime security network, and outlining the challenges facing the construction of a system of global maritime domain awareness.

Building Regional Networks

The USN has conceptualised the global 1000-ship Navy as being built around existing regional cooperative ventures to enhance maritime security, where such initiatives exist, and the creation of new cooperative initiatives in regions where they do not. In keeping with the network theme, and analogous to the Internet which is constituted by networked but independently operated computers, these regional schemes, Admiral Mullen states explicitly, need not be led by the USN or even involve the United States at all.[66]

Nevertheless, the USN has pinpointed certain regions as particular areas of concern to global maritime security due to their strategic locations and/or instability, involving factors such as the potential disruption of good order at sea, international trade or energy supplies, and the potential to foster the growth of those irregular Islamist enemies that are the focus of current US national security efforts.

The NSP identifies three 'maritime focus areas' that correlate directly to the priority regions in the global campaign against Islamist extremism: the western Pacific, especially Southeast Asia; the Middle East and Southwest Asia; and the Mediterranean.[67] These regions also include most, if not all, of the world's most important, and vulnerable, maritime choke points.

In Southeast Asia, the NSP takes particular note of the Muslim terrorists and insurgents who are using violence to forward their goals in an arc stretching from southern Thailand through the Malay peninsula, the Indonesian archipelago and Borneo to the southern Philippines. The NSP notes the Al Qaeda links of regional organisations such as Jemaah Islamiyah and the Abu Sayyaf Group.[68] The importance of archipelagic and peninsular Southeast Asia barely needs stating: with its straits forming the essential link between the Indian Ocean and the semi-enclosed seas of the western Pacific and the large markets of Northeast Asia, the region straddles an international trade route vital for regional and, indeed, global, economic - and consequently also political – stability.

A focus for American Theater Security Cooperation in Southeast Asia since its inception in 1995 has been the annual bilateral Cooperation Afloat Readiness and Training (CARAT) and, since 2002, the Southeast Asia Cooperation Against Terrorism (SEACAT), exercises. US maritime forces conduct these bilateral exercises each year with the navies of Brunei, Indonesia, Malaysia, the Philippines, Singapore and Thailand, exercising a range of scenarios depending on the requirements of the CARAT partner nation and on sometimes limiting political factors. Vietnam now also observes CARAT activities and is likely to become the seventh full participating partner in coming years. The exercises focus on improving interoperability, multinational coordination and information sharing, and include the exercising of humanitarian assistance and disaster relief and, increasingly, maritime interdiction and maritime counter-terrorism scenarios. The United States hopes that the CARAT program will eventually evolve into a multinational exercise, although that will be difficult given the prevailing political and strategic cultures in the region which continue to indicate a preference to abjure from security multilateralism amid prevailing sensitivities, disputes and mutual suspicion. Despite this difficulty, the Commander Logistics Group Western Pacific/ Commander Task Force 73 (the executive agent for both CARAT and SEACAT), Rear Admiral William Burke, USN, has gone so far as to claim that 'CARAT is the model exercise for the 1000-ship Navy'.[69]

The Middle East and Southwest Asian areas of primary interest conform largely to the maritime parts of the existing US Central Command (USCENTCOM) area of responsibility: the Persian (Arabian) Gulf, Red Sea, Gulf of Oman, the Arabian Sea and parts of the north-western Indian Ocean, including the vital choke points of the Strait of Hormuz, the Suez Canal and the Bab al Mandeb.[70] The Mediterranean area has a strong focus on the northern African littoral as well as the Suez Canal and the Strait of Gibraltar. In addition, the NSP identifies other maritime areas of interest where regional instability has the potential to negatively impact maritime security: the Gulf of Guinea and Africa's Swahili Coast, parts of South America and the Black Sea.

Nascent regional networks already exist and, in the American conception, should form part of the Global Maritime Network. For example, NATO's Operation ACTIVE ENDEAVOUR in the Mediterranean has been carrying out maritime security operations and protecting that region against possible terrorist activity since October 2001, and has enlisted the support of Russia, Ukraine, Algeria, Israel, Morocco, Albania and Georgia.[71] In the USCENTCOM area of responsibility, Combined Task Force (CTF) 150, established in the early stages of Operation ENDURING FREEDOM in the war against terrorism, conducts maritime security operations in the Arabian Sea, Gulf of Oman, Gulf of Aden, the Red Sea and the adjacent parts of the Indian Ocean. Currently led by the French navy, it has previously been commanded by Germany, the Netherlands and Pakistan.[72]

The United States is leading an effort to establish a maritime security network in the Gulf of Guinea, including engagement with the Maritime Organization for West and Central African States, which is pursuing the establishment of an integrated regional coast guard network, and through the Africa Sea Power Symposia.[73] And US Southern Command (USSOUTHCOM) holds a series of maritime security exercises in Central America and the Caribbean, and provides maritime security assistance to the region under the Enduring Friendship program.[74]

These peacetime roles to influence regional security environments involve not only capacity building activities to improve the protection of important sea lanes, but also support rendered by maritime forces to wider efforts to provide stability to erstwhile unstable – or at least, vulnerable – regions and states. Such operations include humanitarian and civic assistance missions, such as the response to the Indian Ocean tsunami and the deployment of the hospital ships USNS *Mercy* and USNS *Comfort* to regions such as archipelagic Southeast Asia and Central America, respectively, where their humanitarian missions can help win the 'hearts and minds' contest against the 'disruptive ideologies' noted above and destabilising transnational criminal influences.

Following the deployment of *Mercy* to Southeast Asia in 2006, the amphibious assault ship USS *Peleliu* deployed for four months beginning in June 2007 to Southeast Asia and the Southwest Pacific to provide medical and other humanitarian and civic assistance in a mission entitled Pacific Partnership 2007. The deployment involved participation from humanitarian non-governmental organisations and other regional states.[75] It seems as though such regular deployments may become a sort of precursor to a regional US Global Fleet Station (see below), although it is possible that that name may not be used in Southeast Asia due to overriding local sensitivities.

There can be no doubt that these nation and security-building activities play an increasingly important role in the American conception of the 'long war'. For example, Admiral Mullen explicitly linked such enterprises to that overriding strategic priority: 'I view relief efforts … and any number of other engagement activities … as very much a part of winning the war on terror. And we are at war'.[76]

Global Fleet Stations

One supporting concept under development is the establishment of Global Fleet Stations, which will consist of forward-deployed 'shallow draft ships and support vessels' based in littoral regions: a form of Sea Basing. Global Fleet Stations could become both a means of exerting the positive influence desired by Mullen and his successor and a means by which to build cooperation and local capabilities for maritime security. They could be staffed by specialist Foreign Area Officers and form a 'hub where all manner of Joint, Inter-Agency, International Organizations, navies, coast guards and non-governmental organizations could partner together as a force for good' in particular regions of interest.[77] The Maritime Strategy further states the need to develop 'sufficient cultural, historical, and linguistic expertise' amongst the three sea Services 'to nurture effective interaction with diverse international partners':[78] a kind of 'neo-imperial' enabling force for the global policing and security-building deemed necessary by the United States to safeguard the maritime domain?[79] Like the 1000-ship Navy itself, the Global Fleet Station idea is clearly idealistic, and requires the support of sometimes hesitant coastal nations to be effective.

Global Fleet Stations, further described by Mullen as 'a persistent sea base of operations' focused on shaping (that is, influence) operations, Theater Security Cooperation and contributing to maritime domain awareness, are being developed explicitly as regional support elements for the 1000-ship Navy.[80] In April 2007 the initial Global Fleet Station deployed to Panama and six other Central American and Caribbean states in a six month pilot mission, consisting of the high speed vessel HSV 2 *Swift* and USN and US Coast Guard training teams.[81]

The second Global Fleet Station, named the Africa Partnership Station, began a seven month deployment to the Gulf of Guinea in November 2007. Consisting of *Swift* and the amphibious dock landing ship USS *Fort McHenry*, the deployment involves the participation of personnel from the three US Sea Services, military staff from seven NATO European states, staff from the State Department and the US Agency for International Development, Department of Homeland Security, Department of Commerce and the National Oceanic and Atmospheric Administration, and selected non-governmental organisations. This is indeed the joint, combined, inter-agency and still wider maritime collaboration of the type posited by Mullen at the Naval War College less than 18 months earlier, representing an impressive case of backing words with actions. According to US Naval Forces Europe-US Sixth Fleet, the Africa Partnership Station will concentrate on providing tailored education and training to improve maritime safety and security, including for enforcement, interdiction, search and rescue and counter-terrorism operations, as well as support for over 20 humanitarian assistance missions.[82]

Maritime Domain Awareness

The United States takes a comprehensive and inclusive view of what constitutes maritime domain awareness. Its definition of the maritime domain itself is also so broad as to make the MDA task extremely difficult, as laid down in the *National Plan to Achieve Maritime Domain Awareness*.[83] The maritime domain:

> is all areas and things of, on, under, relating to, adjacent to, or bordering on a sea, ocean, or other navigable waterway, including all maritime related activities, infrastructure, people, cargo, and vessels and other conveyances.

Maritime domain awareness:

> is the effective understanding of anything associated with the maritime domain that could impact the security, safety, economy, or environment of the United States.

In the international context of the 1000-ship Navy, one can substitute all participants in the initiative – or perhaps even all states *per se* – for the United States. This is a highly ambitious undertaking which will demand not only the application of technology but also the development of protocols and procedures, political and, at times, possibly legal arrangements for the accessing and sharing of data. The MDA aspect of the initiative can be divided into two elements: information collection and information sharing.

Information Collection

The extent of United States ambitions for MDA data collection is probably not entirely obvious even from the above definition. The ultimate intent is to be able to maintain tracks on the entire global merchant fleet of approximately 121,000 ships of 300 gross registered tons (grt) or larger. In the words of the USN's Director of Naval Intelligence: 'As we evolve down the road we'll get closer to tracking all [merchant ships] that are in the world on a minute-by-minute basis'.[84] A common theme in USN pronouncements is to draw a parallel with the way international civil aviation is tracked using a system of global identification standards for airliners and civilian-based air traffic control radar.[85] It should be noted though, that the analogy is not entirely sound: there is an underlying safety demand to ensure that large, relatively fast moving airborne people carriers do not collide and fall from the sky. The system thus represents a practical necessity to ensure the safety and viability of the civilian aerospace industry. There is no comparable safety issue, on the other hand, that would require the constant, global tracking of the world's fleet of merchant ships. Nevertheless, one of the USN's ongoing technology development programs involves the construction of an 'unlimited

track database' which would 'merge and display' maritime track data from a number of separate databases.[86]

As indicated earlier, Admiral Mullen has placed considerable importance upon the development and application of technology, and information technology, in particular, as 'the single largest contributor' to future maritime security. He suggests that, even today, such technologies can play a leading role in negating the enemy's intentions.[87]

Whilst MDA technologies can indeed play an important role, and they are indispensable to gaining an understanding of the maritime domain, it is also essential that the limitations of technology be recognised. This is less a question of the technical limits of technology, but rather that an understanding is required that technology functions only as a tool - a particular means to achieving a specific objective - and not an end in and of itself. In other words, there are significant dangers in assuming that the task of enhancing maritime security can be equated with achieving a certain level of domain awareness: such as mistaking MDA for maritime security. Indeed, the promotion of technology as a solution to strategic, as opposed to merely technical, problems has been identified as a characteristic typical to American military and strategic culture.[88] It will thus be important that MDA technologies are treated as enabling tools for maritime security rather than as a wand to magically solve the challenges of the current maritime security environment. America's allies and close coalition partners may play an important role in this respect by helping the United States to keep a sense of perspective regarding the role of MDA technologies.

One question worth asking is whether it is really necessary to be able to track the world's entire fleet of merchant ships persistently. The need to find or track specific ships when required is understandable, and authorities would need the capability to be able to do so. But the assertion that the war on terrorism demands that 'one of the strategies that we have to focus on … is finding the needle in the haystack' by using a database of ship tracks, assumes that we know what we are looking for in the first place.[89] Otherwise we might end up knowing an awful lot about all the 'haystacks' and not much about the apparent needle, until we are pricked. It remains the case that MDA information in isolation may not be sufficient to prevent major attacks. Rather, it will be of most utility when matched with actionable intelligence, often from non-maritime sources, on specific threats. The lack of good intelligence, on the other hand, has spurred greater efforts to develop better MDA capabilities, including, for example, NATO's Maritime Safety and Security Information System (MSSIS), which supports Operation ACTIVE ENDEAVOUR in the Mediterranean.[90]

A number of technologies and strategies are being pursued to attain the necessary information to achieve comprehensive MDA - a kind of peacetime (or quasi-war time, given contemporary circumstances) equivalent to the US military concept of dominant battlespace awareness. Piecing together a composite picture for comprehensive MDA is an extremely challenging task, which involves the incorporation of a wide range of

data beyond just tracks of merchant ships. Attaining the data, from all sources, such as customs and port state reporting requirements, military and non-military sensors and ship transmissions, is only the first step in the process. Such vast quantities of disparate data need to be fused and analysed that specialised computer-based algorithms are required to process all the information and potential risk factors in the maritime trading system identified. One of the goals of the analysis process is to identify anomalous behaviour. For example, anomalies in a ship's behaviour might be identified by comparing information on the ship's actual location and bearing with its sailing schedule and itinerary. This type of process is already being implemented not only by the United States and in other national systems, but also in some regional systems.

However, as noted by Martin Murphy, systems relying upon information from AIS and other similar raw data sources can be vulnerable to non-compliance and deception by merchant ships. Moreover, anomalous behaviour is not necessarily easy to detect. For example, a supposedly anomalous voyage pattern was one of the factors that influenced British authorities to board and search the *Nisha* in British waters in December 2001 on suspicion that it might be carrying WMD-related materials, yet on investigation that pattern turned out to be normal for that particular ship.[91] At the very least, the computer programs developed to crunch all the raw data may need to be fed with historical information on the normal mode of movement and behaviour of individual ships in order to be able to detect anomalies: a vast undertaking. And even with such historical data sets, the MDA picture will probably still need to be matched with specific intelligence information to be truly effective in preventing terrorist attacks, although there are obvious benefits from enhanced MDA for all manner of maritime enforcement and border protection operations.

The US *National Plan to Achieve Maritime Domain Awareness* sets out an 'essential task list' for MDA.[92]

US MDA Essential Task List

1. persistently monitor in the global maritime domain:
   - vessels and craft
   - cargo
   - vessel crews and passengers
   - all identified areas of interest

2. access and maintain data on vessels, facilities, and infrastructure

3. collect, fuse, analyse, and disseminate information to decision makers to facilitate effective understanding

4. access, develop and maintain data on MDA-related mission performance

Sources of Information

Perhaps the most important sources of data are generated by non-military means, such as the commercial and customs information concerning ships, cargoes and crews. The United States, in particular, established a range of new maritime security regulations immediately following 2001. The most important of these for MDA purposes is the Advance Electronic Cargo Information, or 24-hour Rule, administered by US Customs and Border Protection. This requires detailed cargo manifest information to be transmitted electronically to Customs and Border Protection via their Automated Manifest System, 24 hours prior to loading, on all containerised or break-bulk cargoes loaded in foreign ports and destined for the US. The information is then assessed by an Automated Targeting System (ATS), which also incorporates historical and relevant current data from other sources. The ATS employs database technology to correlate the information against specified risk criteria to identify potential high-risk cargoes, which can then be targeted for further assessment in the foreign port - an example of the system of layered security to deal with potential threats as far from United States shores as possible. The ATS itself is not limited to assessment only of containerised cargoes, and is in use for all types of cargoes carried by ships.[93]

Although the 24-hour Rule is an American regulation, it is likely that other countries will adopt similar arrangements in the coming years, to a point where it may become the norm for most international trade. This would add a large quantity of information into national MDA databases or even, potentially, regional or international databases.

The US Department of Homeland Security is also investigating technologies to monitor containers and cargoes while they are in transit. One existing technology that is being considered for this purpose is radio frequency identification (RFID), data from which could be integrated into the larger system for maritime information collection and analysis.[94]

Advance Notice of Arrival is a further source of information. The US Coast Guard requires all ships intending to call at an American port to provide notification 96 hours prior to its scheduled arrival in port. Vessels are required to provide voyage history, cargo, crew and passenger information. Most port states require similar information, and the United States also has an Advance Passenger Information System Rule requiring crew and passenger manifests to be submitted electronically 96 hour prior to arrival and 15 minutes prior to departure.[95] Compiling information on ships' crews ought to become easier as a result of the International Labour Organization's *Seafarers' Identity Documents Convention (Revised), 2003 (No. 185)*, which requires all 1.2 million seafarers engaged in international trade to carry a standard identity card encoded with biometric information, although the Convention's effectiveness will depend upon the extent of its ratification and implementation.[96]

An important source of information is the ship Automatic Identification System (AIS), which automatically transmits data on ship identity, position, speed and heading via VHF radio to other AIS transponders and shore facilities. Because it is radio-based, however, its range is limited to line-of-sight. This IMO regulation was adopted as an amendment to the *International Convention for the Safety of Life at Sea 1974* (SOLAS), and requires all ships 300grt and above engaged on international voyages, cargo ships 500grt and above and not engaged on international voyages and all passenger ships to carry AIS.[97] The USN is working on an updated version, AIS IIB, which will provide 'added sources and functionality' to improve the common operational picture available to warships and command centres.[98]

The IMO has also agreed to new amendments to SOLAS that will come into effect in October 2008 on the long-range identification and tracking (LRIT) of vessels.[99] The LRIT regulation applies to the same classes of vessels as that regarding AIS. These vessels will be required to automatically transmit information via satellite on their identity, position, date and time of position and to give notice that they are proceeding to a specific port. There are a number of limitations on the system, however. Firstly, coastal states will be able to access data on all ships sailing up to a distance of 1000 nautical miles from their coast, except when the ship is in the internal waters of another state or the territorial sea of the ship's flag State. Secondly, states will be able to access data on ships which have indicated an intent to make a call at any of their ports, irrespective of ship location except when it is in the internal or archipelagic waters of another state. Flag States will have access to the data irrespective of ship location. States will not have direct access to the data, which will be held at LRIT data centres. Because of the convoluted restrictions on which category of state can access what data, complex databases will be needed to process the information, making real-time or near real-time tracking of ships using LRIT alone potentially problematic.

Further information on the characteristics and management of individual merchant ships is provided by the Electronic Quality Ship Information System (Equasis), a global port State control information system, although it depends upon the voluntary participation of the private sector.[100] Encouraging private sector players such as shipping companies to participate in the 1000-ship Navy should also increase the information available on ship movements, and potentially provide participating navies access to greater data sets from AIS transmissions.[101]

One of the great challenges for MDA is that IMO security regulations do not apply to vessels less than 500grt, or safety regulations to vessels less than 300grt, nor to fishing boats or private pleasure craft. That leaves significant holes in the information-gathering net. Although individual states may try to regulate these types of craft within their own waters, identifying and tracking them more generally may be impossible, given their sheer number and, in most cases, their small size. Nevertheless, some states are recommending that non-SOLAS craft be fitted with Class B AIS, which is a

cheaper version that lacks some of the features of the IMO-mandated Class A device. The Tripartite Technical Experts Group on shipping safety in the Malacca Strait, for example, has recommended the promotion of Class B AIS for non-SOLAS vessels using the strait, although it is difficult to envisage all local craft being forced to adopt the system.[102] Some fishing boats are required to carry satellite-based vessel monitoring systems (VMS), such as those operating in the South Pacific Forum Fisheries Agency area of responsibility. However, gaining access to that type of data for the 1000-ship Navy or regional MDA networks would be highly problematic due to commercial sensitivities and strict confidentiality arrangements prohibiting release of information to third parties.

To these sources of information need to be added ship reporting and traffic systems, intelligence, surveillance and reconnaissance (ISR) capabilities and other intelligence sources. Some countries have established compulsory ship reporting systems or vessel traffic systems for safety of navigation and search and rescue purposes. For example, the Australian Maritime Safety Authority administers the AUSREP and REEFREP ship reporting systems for shipping in and around Australia. A similar system exists in the Malacca and Singapore straits (STRAITREP). STRAITREP is integrated into the Maritime Port Authority of Singapore's vessel traffic information system (VTIS) for radar-based monitoring of shipping in the Singapore Strait.[103] The IMO's Marine Electronic Highway (MEH) demonstration project for the Malacca and Singapore straits will further improve the maritime traffic data available to the littoral states.[104]

There exists a wide range of both traditional military and civilian ISR sensors used to detect and collect data on shipping and the security situation at sea. These most commonly come from aerial surveillance but also from land-based radar, space-based sources and sensors on warships and other patrol craft. In the Australian case, apart from sea-based assets, this ISR data is derived from Coastwatch civil aircraft contracted to Border Protection Command and Royal Australian Air Force AP-3C Orion maritime patrol aircraft; to which must be added information from the Jindalee long-range over-the-horizon radar, other shore-based radars and, eventually, the more persistent aerial surveillance capacity of high endurance unmanned aerial vehicles (UAVs).[105] Commercial satellite imagery may also be purchased when required (if an appropriate satellite is available).

In the US context, a far greater array of capabilities is available, including dedicated intelligence-gathering observation satellites. One Cold War system being redeveloped for the MDA task is the Sound Surveillance System (SOSUS) of fixed underwater acoustic arrays originally deployed to detect Soviet submarines. SOSUS was able to identify individual Soviet submarines by each boat's unique sound signature.[106] Efforts are under way to upgrade SOSUS to enable it to track merchant vessels, including in littoral waters and ports, which are difficult areas to monitor due to the high level of ambient noise.[107]

Other information sources include signals and other electronic intelligence data, human intelligence, and intelligence from national law enforcement authorities and international networks.

Surveillance and Cooperation in Southeast Asia

Increasing levels of cooperation in the Malacca and Singapore straits under the MALSINDO coordinated patrols scheme can also benefit the MDA picture in the straits. For example, Singapore has initiated the Project SURPIC maritime surveillance system with Indonesia, which involves radars stationed along the Singapore Strait, with a tracking station based on the Indonesian island of Batam which receives radar and other surveillance data. The system produces a common operational picture of the strait. In addition, the Eyes-in-the-Sky cooperative aerial patrols involving the three littoral states provides aerial surveillance data, albeit on a non-persistent basis.[108] Thailand, after initially rejecting an invitation to join MALSINDO and Eyes-in-the-Sky, has since indicated that it may yet take part.[109] If Thailand does join, then presumably it would add to the information on shipping entering and exiting the western end of the Malacca Strait.

The Indonesians also are establishing a system of nine coastal radars along the Malacca Strait, four of which have been completed. Two of those were funded by the United States, and plans are under way to establish a similar system for the Makassar Strait.[110] The United States is also assisting Malaysia to upgrade the command centre and coastal surveillance stations of its Integrated Maritime Surveillance System.[111] What is not known, though, is whether the littoral states will share this surveillance information, even with each other.

In the southern Philippines, a maritime surveillance system combining maritime platforms, air assets and coastal radar stations is being constructed by the Philippine Navy as part of its Coast Watch South project to improve maritime security in the tri-border area of the Sulu and Celebes (Sulawesi) Seas. The project has evolved into a plan for a comprehensive interagency approach to improve maritime surveillance and enforcement response capabilities, strongly influenced by Australia's successful Border Protection Command model of interagency cooperation and coordination. The ambitious plan involves the construction of 17 new Coast Watch stations (in addition to five existing stations) in an arc stretching from southern Palawan to Davao in eastern Mindanao, and the acquisition of new patrol boats and aircraft.[112]

Coast Watch South will be constructed over three phases, but will require substantial external funding and assistance, primarily from Australia and the United States, if it is to be successful. The Philippines has indicated that it favours expanding its bilateral, but only occasionally operationalised, maritime patrol agreements with both Indonesia

and Malaysia into a more comprehensive multilateral maritime security system for the tri-border region as a logical outgrowth of Coast Watch South.[113] However, basic issues of historical mistrust, territorial and maritime disputes (including the nascent Philippine claim over Sabah and the Ambalat dispute between Indonesia and Malaysia), undelimited boundaries and lack of capacity, combined, ensure that the prospects for such a development will remain limited over the near term. Nonetheless, the fact that the very idea has been raised at least places the construction of a sub-regional network on the agenda for the medium term.

Implications for Naval Cooperation

The two key components of the 1000-ship Navy identified earlier, improved MDA and improved enforcement capabilities, each have implications for aspects of naval cooperation. The following discussion focuses on the possible solutions to solve current information sharing shortcomings, particularly the challenging task of establishing regional maritime common operational pictures, as well as the implications for maritime enforcement and broader issues of interoperability, set within a framework for naval cooperation.

Framework for Naval Cooperation

Participation in the cooperative networks envisaged by the 1000-ship Navy can be analysed using a conceptual framework for naval cooperation set out below, which identifies four levels of cooperation: cooperation at the alliance level; in coalitions; non-coalition naval cooperation; and more general, maritime cooperation.[114]

Framework for Naval Cooperation

1. *Alliances* involve the highest degree of political commitment. Naval cooperation carried out under the auspices of an alliance may encompass the entire span of maritime operations, from the most benign forms of activity to the highest level of warfighting operations.

2. Cooperation at the *coalition* level entails a political commitment and defined political objectives by coalition members, although that will not mean that all members of a coalition have exactly the same political objectives. Coalitions are more limited in scope than formal alliances, often lacking a *mutual* commitment and not requiring the same degree of shared worldviews.

3. *Non-coalition naval cooperation* refers to cooperation between navies which takes place outside of coalition or alliance contexts and does not require any specific common political or strategic objective. Cooperation at this level tends to be limited in scope and focused on non-controversial areas, especially related to operations in benign conditions or constabulary roles.

4. *Maritime cooperation* involves navies and/or other maritime security agencies such as coast guards that engage in benign or constabulary operations in normal conditions. Maritime cooperation may or may not involve navies directly. The level of political commitment involved can vary with the circumstances.

Because efforts to establish both regional and global maritime security networks will require cooperation between navies and other agencies of states with diverse backgrounds and political interests, and different degrees of familiarity, construction of the 1000-ship Navy is likely to cut across all four levels of the framework outlined above. The varying quality of different sets of international relationships are particularly apparent when it comes to collecting and sharing security-related information, whilst there are also potential organisational culture barriers to be overcome with regard to cooperation between civilian agencies and the military, although Australia's Border Protection Command provides a good example of how effective outcomes from interagency cooperation can be achieved.

Information Sharing

Once information has been collected by national agencies and, in some cases, processed, the second element of putting in place a global, comprehensive MDA picture is the sharing of that information with 1000-ship Navy network members, whether on a bilateral, regional or coalition basis. As discussed below, information sharing is complicated by political, technical and legal factors.

Improving coalition interoperability has been given a prominent role in USN thinking, particularly now that the Global Maritime Partnership has become entrenched as a leading element of naval policy and the Maritime Strategy. The Technical Cooperation Program (TTCP), a longstanding forum for defence science and technology cooperation between Australia, Canada, New Zealand, the United Kingdom and the United States, has, for example, established an initiative to consider the 'FORCEnet Implications for Coalition Partners'.[115] And, as the commander of US Space and Naval Warfare Systems Command (SPAWAR) has stated: 'FORCEnet is a key enabler for the 1000-ship Navy… We're at the point where we can make this capability available to our trusted allies, and we plan to do that'.[116]

Politically, it is an inescapable fact of life that there are different qualities of political trust and security relationships between states, which inevitably determines what information can be shared with a potential network partner and what can not. Access to classified data can be circumscribed even between a single state and its various alliance and coalition partners. The United States, for example, grants a higher level of access to intelligence product to its closest allies such as Australia, Britain and Canada than to other alliance partners, and cooperates more intimately with them when it comes to the design and implementation of capabilities and procedures for improved interoperability - including in the ABCA (Australia, Britain, Canada and America) group and Multinational Interoperability Council (MIC).[117]

However, the political sensitivity of some states to being involved in a US military-led enterprise may be a limiting factor on the ultimate membership of the 1000-ship Navy.

One partial solution to this issue is the stress on developing regional information sharing networks based on unclassified data. That probably will not overcome the complexity of the web of existing security relationships, however.

A related issue for the 1000-ship Navy is that, although the initiative is being promoted by the United States as a politically distributed network - not a coalition *per se* led by the USN - it is the United States that inevitably has taken the lead in developing a global MDA capability, including the incorporation of highly classified information gathering technologies. The 1000-ship Navy is in part a means by which to improve the global comprehensiveness of that capability by incorporating data gathered by the sensors and agencies of partner nations. The question that remains unresolved in this regard is the extent to which the United States is, in turn, willing to share the extensive quantity of MDA information it generates from its own sources. In other words, will the United States be as willing to give as to receive, even with its own alliance or close coalition partners? Further, would the data be shared in its raw form or as a processed product? At the very least, it is likely that the data source, whether classified ISR sensors or other intelligence sources, would not be divulged. Although it is possible to transfer data which has been sanitised in order to protect the data source, concerns may remain should the data even provide hints to non-alliance or non-coalition partners of national intelligence-gathering capabilities.

Technical impediments to information sharing can embrace a range of factors, although development of enabling technologies for this purpose is probably the easiest limiting factor to overcome, as many of the technologies already exist and, to some extent, are in place. Developing the capacity of small navies and developing countries to successfully incorporate the technology can be somewhat more difficult. Further impediments can be characterised under the umbrella term 'interoperability', discussed in more detail below.

Legally, there may be restrictions on the types of data that can be shared. For example, access to LRIT information is bound by strict confidentiality requirements, in a fashion akin to that by which fishing vessel VMS information collected by fisheries management organisations must be kept confidential and not passed on to third parties.[118] A number of concerns drive confidentiality requirements, including commercial sensitivity, the potential for discrimination against particular vessels and, ironically, security. Similarly, other information collected by national agencies can be affected by confidentiality issues, particularly information used by customs organisations which often may involve issues of commercial sensitivity. Indeed, some information may not be passed between agencies of the same government for such reasons, let alone between states. Some national jurisdictions also have other domestic limitations on information transfer, including privacy considerations.

CENTRIXS

One solution that the United States has developed and employed in recent years for information sharing in the coalition context is the Combined Enterprise Regional Information Exchange System (CENTRIXS). Originally envisioned as an operations and intelligence information sharing network by US Central Command as early as 1999, CENTRIXS was developed for use in Operation ENDURING FREEDOM and the wider war against terrorism.[119] The system evolved from the Coalition Wide Area Network (COWAN) initially employed in the US-hosted Rim of the Pacific (RIMPAC) multinational naval exercises in the late 1990s.[120] The Multinational Information Sharing (MNIS) Program, established in early 2004, designated CENTRIXS as the US Department of Defense 'standard for multinational information sharing networks using the Global Information Grid (GIG)'.[121] CENTRIXS-M (for maritime) was developed as part of the Trident Warrior experimentation program to facilitate data exchange between coalition navies and is viewed as a building block to establishing the 1000-ship Navy.[122]

CENTRIXS can provide a number of web-based communications services for information sharing in the coalition operations environment, summarised below.[123]

It uses commercial-off-the-shelf (COTS) technologies where possible, to keep costs to a minimum. In one example of the relative simplicity of the equipment needed to make the system work, the USN installed a portable CENTRIXS system aboard an Indonesian frigate during its 2006 CARAT exercise with the Indonesian Navy. Consisting only of a laptop computer and an Iridium satellite phone connected to a small antenna, signals were transmitted via satellite and the Pacific Region Network Operations Center in Hawaii, and received in real time by US warships participating in the exercise and another, larger CENTRIXS system set up at the CARAT Indonesia headquarters located in Surabaya.[124] The use of CENTRIXS is becoming increasingly commonplace as training improves and more terminals become

CENTRIXS Capabilities

- Common and consistent situational awareness of the battlefield Common Operational Picture (COP)

- Common Intelligence Picture

- Electronic mail (E-mail) with attachments

- Web-enabled services, office automation, bulletin boards, and chat service (collaboration services)

- Voice over Secure Internet Protocol (VoSIP)

available. Both the Philippines and Thailand at-sea phases of CARAT 2007, for example, employed CENTRIXS.[125]

USSOUTHCOM has gone a step further under its Enduring Friendship initiative in Central America and the Caribbean. Reminiscent of Australia's Pacific Patrol Boat program, USSOUTHCOM will provide each partner nation with four 43-foot fast interceptor boats, each equipped with a sensor and communications package. Most importantly, the boats will be equipped with CENTRIXS terminals, meaning that once the full force of 32 boats (distributed between eight partner states) is operational, they (and US and other CENTRIXS-capable platforms) will be able to build a common regional MDA network, greatly enhancing counter-drug and other maritime surveillance and enforcement operations.[126]

CENTRIXS in fact consists not of a single network but of multiple, unconnected networks, or coalition 'communities of interest' (or enclaves). Networks can also be bilateral and certain coalition partners may participate in multiple networks. In the USCENTCOM area of responsibility in early 2004, for example, the demands of conducting Operations ENDURING FREEDOM and IRAQI FREEDOM, as well as other tasks in that region, determined that USCENTCOM had to share information with the following, sometimes overlapping, communities: Global Counter-terrorism Forces (66 members); Multinational Coalition Forces-Iraq (51); Combined Naval Forces Central Command (11); International Security Assistance Forces for Afghanistan (33); NATO (26); Gulf Cooperation Council (6); and the 25 regional states within the USCENTCOM area of responsibility.[127]

This already complex political environment is exacerbated by restrictions on the level of information that can be shared within a particular community of interest, due to political and information security considerations. Logically enough, as noted above, highly sensitive information may be entrusted to an enclave involving only close allies and coalition partners rather than to one inclusive of a wider, more politically diverse set of participants. This has been described in terms of a 'series of concentric circles of access' with regard to coalition operations led by USCENTCOM, with the United States in the centre circle. The states comprising each successive circle received reduced access the farther they were positioned from the centre.[128]

Ultimately, the American intention is for CENTRIXS to provide a single, integrated coalition network for operations around the globe, whereby a single workstation could be used to exchange information with multiple communities of interest.[129] Already, the system has made significant progress towards that end. To illustrate, a useful comparison can be made between the command, control, computers and intelligence (C4I) architecture used in the RIMPAC 2004 and RIMPAC 2006 exercises.

In RIMPAC 2004 four separate CENTRIXS security enclaves were needed: one for use by US forces only, using the Secret Internet Protocol Router Network (SIPRNET);

CENTRIXS FOUR EYES for Australian, British, Canadian and US forces; CENTRIXS-J for Japan and the United States; and CENTRIXS-R for Chile, South Korea and the United States. This system achieved only limited interoperability: only SIPRNET and CENTRIXS FOUR EYES were genuinely interoperable. Connectively between all four enclaves was dependent upon physical information redistribution by a central controlling node in Pearl Harbor, which assigned data a particular classification level before being transferred. This process slowed information exchange and did not allow Japanese, Korean or Chilean forces to send or receive e-mail attachments; not did it allow cross-enclave participation in chat-based communications.[130]

In RIMPAC 2006, however, the introduction of the Cooperative Maritime Forces Pacific (CMFP) community of interest within the CENTRIXS Global Counterterrorism Task Force (GCTF) security enclave enabled greatly improved interoperability amongst the forces of all eight participating states.[131] Not only the exercise headquarters and other command and control shore sites, but all participating warships were able to access CENTRIXS CMFP. The common network allowed a common operational picture to be shared, as well as web-browsing, e-mail and chat, using satellite connections to the Pacific Regional Network Operations Center, with servers also located in Canberra and Esquimalt, British Columbia.[132]

America's closest allies and coalition partners also participate in the annual FORCEnet operational experiment, Trident Warrior, organised by the Naval Network Warfare Command (NETWARCOM) and SPAWAR. The Trident Warrior experiment program develops and tests various C4I technologies and capabilities. Coalition networking and improved maritime domain awareness for the 1000-ship Navy are high priorities. One development to improve the affordability of web-based communications for coalition partners with limited resources and access to sufficient satellite bandwidth is the capability to transfer Internet Protocol data via line-of-sight HF (High Frequency Internet Protocol) and UHF (Subnet Relay) radio transmissions.[133] The downside to radio transmission is that users encounter significant time lags with the transfer of data.[134]

Coalitions Versus Networks

CENTRIXS is already being used widely in the USCENTCOM area of responsibility and now, with CMFP, in the Pacific. As already noted, CENTRIXS is being deployed on interceptor boats as part of the Enduring Friendship initiative, and Commander USSOUTHCOM has also indicated that a CENTRIXS-based system will be established throughout the USSOUTHCOM area of responsibility, encompassing Latin America and the Caribbean.[135] However, CENTRIXS suffers a potential limitation in that it is a US system designed to enable information sharing in US-centric coalition operations.

In terms of the naval cooperation framework summarised above, CENTRIXS exists primarily in the alliance and coalition operations environments, rather than in the more inclusive environments of non-coalition naval cooperation and maritime cooperation; that is, the realm of regional and global maritime *networks* envisaged by the 1000-ship Navy. This raises two potential problems.

First, such a system may have political drawbacks for some erstwhile participants in the Global Maritime Network. Even if we make the assumption that the United States will provide access to all states that might wish to cooperate in a regional CENTRIXS enclave, it is far from clear that all potential participants in the 1000-ship Navy would be willing to accept such a US-centric system, especially one designed by, and for, the US military. In the context of 'exporting' maritime security, as Admiral Mullen himself has admitted, 'Not every nation welcomes assistance from the US'. Yet such states may be willing to accept assistance or participate in situations where the United States is not involved.[136] However, it is probably not unreasonable to make the presumption that CENTRIXS would not be available in situations where the United States is not an active participant.

Second, from a practical, operational perspective, it would be preferable for all members of the global network to have some form of permanent connectivity. In the Indonesian CARAT example cited above, for example, it is all very well for US forces to temporarily install CENTRIXS terminals and provide instructions and assistance in their use for a short-term exercise, but this practice will be of limited utility in a real-world contingency. During the multinational tsunami relief operation off the coast of Aceh, for example, CENTRIXS was not employed as the ships of many participating forces were not equipped with CENTRIXS terminals. Moreover, the operation did not take place within a coalition environment.[137] Although CENTRIXS has progressed significantly since early 2005, the fact remains that it is a system for sharing classified information within the coalition environment. Thus, the need to provide a system accessible for all states participating in an unclassified global network environment remains unmet.

The USN is currently sponsoring a project by the Naval Studies Board of the US National Academies to examine the 'technical and operational implications' of the 1000-ship Navy for cooperation by US national maritime (Navy and Coast Guard) assets with four sets of partners: merchant shipping only; alliance partners; ad hoc coalitions; and others 'who may be friendly but could potentially be hostile'.[138] There is some resemblance here to the naval cooperation framework described above, albeit in a US-centric context. The study is to investigate, inter alia, the specific interoperability needs across the four levels of cooperation, including information sharing requirements; and which technologies, information and operational techniques need to remain classified.

As with the case of CENTRIXS, the Naval Studies Board project reflects a potential discrepancy between the advertised, and seeming actual, nature of the Global Maritime Partnership initiative. On the one hand, the network analogy and much of the rhetoric

indicates that the intention is for a distributed system much like the Internet, whereby the computers of many users are plugged into the network, which is accessed when needed to communicate with other similarly connected machines, with no controlling authority to guide or constrain the networking activity. However, the American systems for cooperation and information exchange described above indicate a high degree of US-centricity which, on the extant evidence, does not seem to fulfil the ideals of a network, whereby third party cooperation could take place using systems not controlled by the United States. Given that the scheme is still in its early stages of development this observation may be premature: the United States role may yet prove to be as advertised - 'to facilitate voluntary enlistment of nations as members in this global partnership'.[139] However, it is easy to at least understand how some states not entirely politically attuned to American perspectives of the world might view the developing technological aspects of the Global Maritime Network as representing a US-led and controlled coalition to achieve primarily American strategic objectives.

The V-RMTC: A Model for Regional Information Exchange?

The leading example of a fully functioning regional maritime information exchange system is the Virtual Regional Maritime Traffic Centre (V-RMTC), which monitors maritime traffic in the Mediterranean, including the Atlantic and northern Red Sea approaches, and in the Black Sea. An initiative of the Italian Navy, the V-RMTC might provide a sound template for unclassified maritime information sharing in other regions.

A V-RMTC Pilot Project was announced by the Italian Navy at a symposium in October 2004. In the first phase of the project, starting in June 2005, participating navies agreed to exchange maritime traffic data for the Mediterranean and Black Sea areas. All data in the first phase was passed to the Italian Navy's Fleet Operational Headquarters which acted as a data collection and delivery centre, and then re-directed to the relevant national naval operations centres. The second phase was to be established during 2006, whereby data will be exchanged directly via a web-based graphic database system between participating states' naval operations centres in near-real time to provide a common operating picture. The system is based upon an inexpensive COTS platform and software.[140]

In October 2006 17 states, including the US, formally signed the V-RMTC agreement, the Operational Arrangement. The Italian Navy will maintain the central Data Fusion Centre, although other, so-called Parent Fusion Centres can be established based on bilateral or multilateral agreements to share information with the main V-RMTC Hub or potentially with the entire V-RMTC community. The agreement leaves open the possibility that the system might in the future establish a dedicated data link to replace

use of the commercial Internet. At present, under the Operational Arrangement, the system only tracks merchant ships of 300grt and above, and excludes other classes of vessel such as ferries and fishing boats. It collects both ship data such as name, number, call sign, position and flag, and voyage data such as ports of origin and destination, including departure date and time and estimated date and time of arrival. All information collected and exchanged under the V-RMTC is to be unclassified.[141] The system is likely to rely heavily on AIS information as well as information provided by the ports of participating states.

The V-RMTC clearly fits within the naval cooperation framework category of non-coalition naval cooperation, and explicitly is not a NATO institution. Indeed, although several NATO members are participants, the V-RMTC does not release information to NATO as an organisation, thereby making it easier to involve a wider range of participating states, which are as diverse as Albania, Israel, Jordan and Romania.[142] On the other hand, NATO's own Maritime Safety and Security Information System similarly provides a common maritime operating picture based on AIS data and is available as a web-based unclassified secure system not only to NATO navies and Mediterranean coastal states but also to other legitimate users such as coast guards, law enforcement agencies and other relevant agencies, and shipping companies. For example, states such as Sao Tome and Principe and Singapore are MSSIS participants.[143] This system has the potential to grow into a much larger, perhaps global network. However, it will carry the political baggage of being an instrument of NATO and the USN, unlike the V-RMTC.

Although the V-RMTC has been developed as part of an 'integrated, combined and interagency strategy',[144] one limitation seems to be that, unlike the MSSIS, it involves only navies at this stage, excluding other relevant agencies, and that the data should be used for 'National Defence purposes only'.[145] And, the exclusion of different classes of vessel may also seem a shortcoming. However, it should be remembered that the national authorities of regional states will be able to add V-RMTC data to other port state, coastal state, customs and ISR information to construct a more complete MDA picture. The Operational Arrangement also states that consideration may be given at a later date to 'the possibility of decreasing the tonnage and opening the range of vessels of interest'.[146] As a system of unclassified maritime information sharing, the V-RMTC has much to commend it. What seems clear, though, is that such a regional network requires one or more states to take a leadership role, at least to establish the system as a going concern.

The Prospects for a Regional Information Exchange Network in Southeast Asia

As noted in an earlier section on MDA data collection in Southeast Asia, especially in the Malacca and Singapore straits, there is an increasing array of maritime safety and security information becoming available to regional states. What, then, are the prospects for the establishment of a regional network for maritime information exchange akin to the V-RMTC in Southeast Asia?

Although there are regional examples where information is exchanged for intelligence or operational purposes, there exists no comprehensive scheme for MDA information exchange. For example, piratical incidents are reported to the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP) Information Sharing Centre in Singapore,[147] with the data available to the 14 member states, in theory, in near real time if the attack is reported promptly. Notably, the littoral states of Indonesia and Malaysia have not joined ReCAAP, thus undermining its potential effectiveness. The International Maritime Bureau Piracy Reporting Centre in Kuala Lumpur also makes available information on piratical incidents. The MALSINDO arrangement and other forms of cooperation, usually of a bilateral nature, involve operational information exchange, at least in theory. And the WPNS Maritime Information Exchange Directory is less a form of data exchange than a reference manual of useful information.[148]

Of greatest promise would seem to be the Regional Maritime Information Exchange (ReMIX) developed by the Republic of Singapore Navy. ReMIX is a web-based system for real-time information sharing involving the posting of maritime reports and news, e-mail and other on-line functions. ReMIX has been developed to facilitate exchange between WPNS navies and was employed during the 2nd WPNS Multilateral Sea Exercise, in May 2007, a program which also included a Multilateral Tactical Training Centre Exercise and a Maritime Security Information Exchange Seminar. The exercise also used the Singapore Navy's Access system, which was fitted to participating warships to provide all participants with a common operational picture.[149]

However, ReMIX would seem to fall somewhat short of providing the type of common MDA operational picture needed for enforcement actions to be undertaken. Nevertheless, the WPNS is believed to be developing a system, possibly based on CENTRIXS, specifically for (that is, limited to) humanitarian assistance and disaster relief operations, largely as a result of the experience of poor communications interoperability following the Boxing Day 2004 tsunami.[150] Of course, once a system is in place, its use can be expanded, even in an ad hoc capacity; yet it remains questionable whether ReMIX or any other information exchange backbone can actually improve the security situation *at sea* – unless it can evolve into a V-RMTC-like system.

The prospects for such an evolution remain slim, however. The political sensitivities in the region over sovereignty and sovereign rights at sea are legion, especially in the core ASEAN states of Malaysia, Indonesia and the Philippines. Such sensitivities are sometimes exacerbated by domestic nationalist pressures, a poor understanding (or acceptance) of the law of the sea and even a certain degree of political immaturity, although the fact that these states straddle vital international shipping lanes perhaps understandably creates a sense of heightened vulnerability to outside forces beyond national control. The geographical complexity of peninsular and archipelagic Southeast Asia is also a complicating factor, with literally thousands of islands making that part of the world an extremely difficult operating environment for effective MDA, enforcement action and cooperation. Territorial disputes and undelimited maritime boundaries further complicate matters.

Further to these underlying problems, the issue of which state could take the necessary leadership role in establishing and administering a regional network is a perplexing one for the Southeast Asian environment. Another reason for doubting the ultimate utility of ReMIX is that it is highly unlikely that the three core ASEAN states mentioned above would accept a Singaporean initiated and administered network.[151] Singapore and its near neighbours tend to have different perceptions of the threat, especially of maritime terrorism, and different security priorities, generally; and Singapore's public diplomacy on maritime security is sometimes viewed as heavy-handed and arrogant and perhaps too closely aligned with American views and interests, as occurred, for example, over Singapore's very public support of a US naval presence in the strait after the RMSI was publicised in early 2004.[152] And there is at least a suspicion that Malaysia has not signed up to ReCAAP because Singapore won the right to host the Information Sharing Centre at the expense of Kuala Lumpur. However, Singapore remains the only regional candidate currently possessing the will, money and capabilities to take the initiating role. To complicate matters still further, it is not clear whether *any* local state would necessarily be acceptable to all of the others for the role; and the idea of an extra-regional state such as Australia, Japan or the US taking that role is completely out of the question.

Any network developed within a WPNS framework also suffers from two other limiting factors. Firstly, as a form of region-wide non-coalition naval cooperation, it may be too inclusive to constitute an effective forum to develop a regional network, given all the active political and strategic tensions which exist between some of its members, including competition amongst the major states for influence in Southeast Asia. Such an inclusive grouping is probably unnecessarily complicating, making agreement even more difficult than already would be the case. Perhaps it would be best initially, at least, to involve only the local, or sub-regional, archipelagic and littoral states, and perhaps their direct neighbours such as India, Thailand and Australia, rather than the entire WPNS family, with other states to perhaps join at a later stage. After all, geographically, the Northeast Asians are barely more a part of that sub-region than is the US or any

other regionally engaged external actor. Secondly, the WPNS remains a naval forum, and thus excludes all the other relevant agencies dealing with maritime security. That is a particularly pertinent issue for a region where coast guard organisations are proliferating, and many other enforcement agencies, such as marine police, play important roles in safeguarding national maritime domains.[153]

In some ways the question for Southeast Asia is whether the data from all the various information collection and sharing centres and systems can be fused. Although the US evidently has volunteered to construct a regional data fusion architecture, it would seem that political barriers may continue to trump technical possibilities.[154] However, even though a network needn't be too terribly sophisticated or expensive - NATO's MSSIS, for example, only requires standard AIS equipment, a computer and Internet connection to enable participation - the challenge of a basic capacity limitation in many regional states, especially Indonesia and the Philippines, may also hamper their ability to participate, should they choose to do so. The capacity constraints involve not only financial resources, but also training, maintenance and the vast scale and complex geography of their maritime domains. Whereas the United States is supplying its Enduring Friendship partners each with four CENTRIXS-equipped interceptor boats, as noted earlier, an archipelago such as Indonesia requires many dozens of similarly equipped patrol boats to be effective. The issue of scale is thus highly pertinent in archipelagic Southeast Asia.

Beyond questions of capacity, there also remains a doubt over the willingness of certain states, especially Indonesia and Malaysia, to share the MDA information that they do produce. A tendency to apply concerns over jealously guarded 'sovereignty' may limit the extent to which information might be shared, even though there are no strict legal reasons why MDA information on shipping in their respective maritime zones, especially AIS data, could not be shared with other states.

Maritime Enforcement

If MDA information collection and sharing can be a difficult process, then the maritime enforcement environment is even more complicated. Indeed, there seems to exist some confusion between the two aspects: information and enforcement. Although a clear distinction can be drawn between information gathering and maritime enforcement powers, there has been an unfortunate tendency for some states to conflate the two. This is apparent in the unnecessarily convoluted constraints on access to LRIT information imposed by the new SOLAS regulations, despite the fact that access to the information itself does not convey any enforcement jurisdiction over shipping whatsoever or diminish in any way the strict jurisdictional limits for enforcement action set out in the *United Nations Convention on the Law of the Sea 1982* (LOSC).[155] The LOSC clearly

limits the maritime enforcement powers that states enjoy in the different zones of maritime jurisdiction. The 1000-ship Navy concept recognises that fact and, in part, may be a response to those limitations by aiming to build the enforcement capacities of states in unstable maritime regions.

Building cooperation for enforcement purposes can be extremely difficult not only due to law of the sea constraints, but also because of the political sensitivities that often are involved. Some states are wary of the PSI, for example, due to concerns that high seas interdiction of suspect vessels may infringe upon freedom of navigation and flag state jurisdiction rights.[156] Some states also are wary of an American scheme promoting interdiction actions when the United States itself still has not ratified the LOSC. This same perception has carried over to the Global Maritime Partnership initiative. The legitimacy of any initiative which promotes more effective policing of the global maritime commons but has been designed and actively promoted by a non-party to the LOSC is thus open to rhetorical attack. As George Galdorisi has argued, America's continued non-ratification of the LOSC 'raises fundamental questions regarding … US leadership in promoting international law and order' at sea.[157] It is not the strict 'legality' of the 1000-ship Navy concept (or the PSI) that is really in question; rather the issue is one of political legitimacy. Clearly, perceptions on this matter will differ amongst states, with traditional United States allies and partners far more comfortable with the legitimacy of the United States role than some non-traditional partners and those coastal states which overzealously guard their rights at sea and wish to push the bounds of the LOSC to extend or 'thicken' their maritime jurisdiction. Nor is it immediately obvious that unsupportive states would necessarily change their position even if Washington ratifies the LOSC.

In Southeast Asia, the complex geographical environment described above has exacerbated the enforcement issue, with disputed or undelimited maritime boundaries making cooperative enforcement arrangements extremely difficult to achieve. The problems in Southeast Asia may be particularly acute due to its distinct geographical circumstances, but similar issues pertain in many parts of the world. Although different sets of neighbouring states have raised issues such as the potential for cross-border hot pursuit arrangements, the reality is that these states probably are not yet able or ready, politically, to negotiate such agreements whilst sovereignty and sovereign rights at sea remain such sensitive topics.

Enforcement in Southeast Asia is also constrained by capacity limitations, not only regarding MDA and information sharing, but also the maritime platforms needed to actually undertake enforcement actions out on the water. Most Southeast Asian militaries were temporarily stunted by the Asian economic crisis. Although recovery is now well under way, the needs of regional states, especially the archipelagic states, are significant. The establishment and development of coast guards such as the Malaysian Maritime Enforcement Agency potentially will improve the situation, but they too will

need time and the direction of considerable resources before becoming effective.[158] One ongoing problem in terms of enforcement capacity in the region is that the budget priorities of some militaries may be for high-end warfighting equipment such as combat aircraft or submarines rather than the workhorses of maritime security: patrol boats and small surface combatants such as corvettes or offshore patrol vessels (OPVs).

Cooperative enforcement is a relatively new concept and requires states to be prepared to forgo jurisdictional exclusivity over waters under sovereign rights, although potentially there are significant benefits to be achieved from improved enforcement. The leading example of a cooperative enforcement arrangement is the *Niue Treaty on Cooperation in Fisheries Surveillance and Law Enforcement in the South Pacific Region 1992*. In particular, subsidiary agreements to the Niue Treaty allow a party to conduct fisheries surveillance and enforcement actions against foreign fishing vessels in another party's waters, including the right to continue a hot pursuit into another party's territorial sea. Presently there are two such agreements in existence: a 2002 agreement between the Federated States of Micronesia, the Marshall Islands and Palau, and a 2005 agreement between the Cook Islands and Samoa; as well as an earlier arrangement between Tonga and Tuvalu. Australia's maritime boundary treaty with France in the Southern Ocean also allows for cooperative fisheries enforcement.

Whilst cooperative enforcement arrangements can be extremely difficult to construct, building capacity in those 'under-governed' maritime regions identified in the *Navy Strategic Plan* so that the coastal states of those regions can improve their own capacities to respond to illegal activities at sea represents a more achievable near-term goal. The United States, in particular, has been globally active in building maritime security capacity. In Southeast Asia, in addition to the United States, Australia, Japan and, to a lesser extent, Singapore, are leading sources of capacity building initiatives. In the South Pacific, Australia has been the primary provider of assistance, supported by New Zealand. Security assistance can take many forms and can include the provision of equipment, training and education, and surveillance and intelligence gathering on behalf of regional states or organisations.[159]

Interoperability

A persistent and inescapable requirement for effective naval cooperation is the need to develop sufficient levels of interoperability between partner navies. The greater the number of navies involved in a regional network, the more difficult interoperability becomes, and the addition of interagency cooperation between navies and civilian agencies potentially adds significant new hurdles for operational effectiveness, including discrepancies between organisational cultures, domestic legal frameworks and standard operating procedures. The ultimate requirement under the 1000-ship

Navy to combine regional networks into a Global Maritime Network in theory multiplies the problem, although most participating navies are likely to be operationally engaged only with regional partners, rather than globally active.

The broad theme of 'interoperability' itself involves rather more than just technical compatibility, and includes the development of standard operating procedures, common or compatible doctrine and tactics, techniques and procedures (TTPs). Australian Defence Force doctrine outlines five 'levels of standardisation', for example, which allow different levels of cooperation: coordination, compatibility, interoperability, interchangeability and commonality. At the highest level of naval cooperation, the alliance, one might expect a reasonable degree of interchangeability or even commonality, although for allies of the United States it can be difficult to keep pace with United States technological developments; whilst at a lower level of cooperation, such as non-coalition naval cooperation or maritime cooperation, one might expect to encounter an ability to coordinate operations with only minimal levels of interoperability.[160] To ensure a high degree of operational effectiveness, doctrine, standard operating procedures and TTPs need to be exercised on a regular basis employing realistic scenarios.

In Southeast Asia the WPNS still seems the most likely candidate for improving interoperability on a multilateral basis. Coast guards and other civilian or paramilitary agencies also need to be included, however. Bilateral interoperability still seems a much easier option for those states, such as Australia and the United States, which desire to deepen their ability to operate with regional states. In the Southwest Pacific, the Pacific Patrol Boat program and its supporting exercise programs, led by Australia, would seem to be the primary means by which to pursue that end.

Implications for Australia and the Royal Australian Navy

When assessing what the implications of the 1000-ship Navy might be for Australia and the RAN, it is first important to understand how Australian authorities view the concept. The primary Australian response has come from the Chief of Navy, Vice Admiral Shalders, who has addressed the 1000-ship Navy vision in terms of the RAN's existing programs of regional engagement and maritime security capacity-building, stating that

> we look favourably on any initiative that increases maritime security awareness and cooperation. In my view, this is the true value of the 1000-ship Navy concept. The Royal Australian Navy continues to engage with our regional partners to build capacity and to encourage cooperation wherever possible. We are on board and willing to pursue the [concept].[161]

This is a sensible approach to take. It promises no new specific commitments whilst stressing the compatibility of Australia's existing programs of maritime security cooperation with the American initiative. Indeed, some Australian programs, such as the Pacific Patrol Boat program, may well prove to be models for the construction of regional networks elsewhere.

Australian Regional Engagement and Cooperation Programs

Australia maintains a robust system of regional engagement and capacity building for maritime security, including via the Defence Cooperation Program. The Pacific Patrol Boat project is the most extensive program, with Australia financing and building 22 patrol boats for 12 Pacific island nations. The RAN also provides Maritime Surveillance Advisors and Technical Advisors in-country, provides further assistance to maintain the boats and in some cases, provides operational funding. Australia, along with France and New Zealand, also provides aerial surveillance to support patrol boat activities. The commitment of the three states was reiterated in a new trilateral Joint Declaration on Maritime Surveillance to combat illegal, unreported and unregulated (IUU) fishing in the region, signed in early 2006.[162]

Australia also provides funding assistance and Defence assets for a range of exercises and combined operations in the South Pacific under the auspices of the Niue Treaty, such as Operations ISLAND CHIEF and KURUKURU. For example, Operation

ISLAND CHIEF 2006 involved the forces of the Federated States of Micronesia, the Marshall Islands, Palau, Papua New Guinea and Kiribati, with aerial and other assistance from Australia, New Zealand and the US, undertaking operations against IUU fishing activities in the exclusive economic zones of the five island states.[163] Operation KURUKURU 2006 involved operations in the exclusive economic zones of Fiji, Samoa, the Solomon Islands, Tonga, Tuvalu and Vanuatu against IUU fishing, as well as smuggling, people trafficking and other illegal activities. Hosted by Tonga and funded by Australia, all island state participants except for Vanuatu contributed Pacific Patrol Boats, with Australia, France and New Zealand contributing aerial surveillance and the Forum Fisheries Agency providing technical support.[164]

What is especially significant about Operation KURUKURU 2006 is that it encompassed the enforcement of good order at sea beyond just combating IUU fishing. This is a model for expanding maritime law enforcement beyond fisheries being pursued by Australia for the South Pacific, either building upon the Niue Treaty subsidiary agreements or negotiating a new multilateral agreement for cooperative enforcement based on similar principles.[165]

Also relevant is the future of the Pacific Patrol Boat project once the lifespan of the current boats expires. Amongst the possibilities being considered are more commercial-based solutions, potentially with a regional fleet of craft rather than separate national fleets as at present, which would be consistent with the proposals for a wider agreement to enforce regional maritime security.[166] The possibility of including a small number of larger, longer-range and higher endurance offshore patrol vessels in the scheme would be a welcome addition. Not only would the acquisition of OPVs markedly improve regional response capabilities in a widespread area of large exclusive economic zones, it would also potentially allow the so-called 'doughnut holes' - the pockets of high seas 'enclosed' by surrounding exclusive economic zones - that fall within the *Western and Central Pacific Fisheries Convention 2000* area for high seas fisheries enforcement, to be policed effectively. Such a proposal may not be supported by all Pacific Patrol Boat operators, however, if it means losing a national capability.

One lesson provided by USSOUTHCOM and its Enduring Friendship initiative, is the relative ease with which a limited number of small states can be equipped with information sharing capacity; in that case using CENTRIXS. The benefits of equipping the Pacific Patrol Boats with the capacity to share a common operational picture would be highly beneficial and should be achievable. It would be especially useful if the boats were able to directly access fisheries VMS data, a capability currently lacking.

The Australian Defence Cooperation Program has also been active in Southeast Asia, especially in Indonesia, the Philippines and Malaysia, in the latter case as part of Australia's commitments under the Five Power Defence Arrangements (FPDA), which increasingly focuses on improving maritime security capacities. Other Australian agencies also play important roles in capacity building for maritime security in these

countries, including the Australian Customs Service and the Office of Transport Security. The Border Protection Command also is pursuing regional engagement,[167] and is likely to become an increasingly important agency in this regard as Australia's whole-of-government approach to maritime surveillance and enforcement continues to attract regional interest as a potential model for other states. The Philippines has been especially attentive to the Border Protection Command model in establishing its Coast Watch South project, and Australia has actively been providing assistance via a number of Australian government agencies.

The Implications of Australian Participation

The broad implications of Australian participation in the 1000-ship Navy are in fact quite limited, as Australia's behaviour with regard to regional cooperation is unlikely to change significantly. The political risks of Australian involvement are low, as the concept has been relatively well received and Australia's close alliance relationship with the United States is both longstanding and well understood, as is Australia's strong support of the PSI, which is somewhat more contentious than the Global Maritime Partnership initiative. Nothing in the 1000-ship Navy concept changes that situation. The potential danger of political complications relating to the concept would arise only if Australia attempts to assertively push for the creation of a regional maritime security network in Southeast Asia, perhaps with an Australian leadership role. The chances of that actually occurring are virtually nil: Australia is highly experienced with dealing with regional sensitivities and would not be so foolhardy as to make such an attempt. Australia has indicated an interest in joining both ReCAAP and ReMIX, but in neither case is this directly connected to the 1000-ship Navy and shouldn't prove especially contentious.[168]

Indeed, the prospects for establishing a regional network in Southeast Asia, as discussed earlier, remain slim. The attitude of Indonesia's Chief of Navy is indicative. Whilst agreeing with the 'wonderful … concept', Admiral Soebijanto also reflected Indonesian sensitivities and stressed the continuing domestic and bilateral cooperation priorities for the Indonesian Navy: that is, the current process of slow, incremental improvements to maritime security and security cooperation will most likely continue unchanged.[169] In the wider region, China's non-committal response to the concept is unlikely to have any implications for Sino-Australian relations.[170] China's non-PLA maritime forces in fact already have an established record of cooperation with the US Coast Guard, even if Sino-American naval relations are more problematic.[171] And, the generally positive response both of the Indian Navy, and the Japan Maritime Self Defense Force, may provide another avenue for Australia to bolster its already growing defence relationships with those countries.[172]

One potential risk factor for Australia may in fact involve the exchange of MDA information with the United States. A question mark remains over the extent of United States intentions to access other states' MDA data: will the United States demand full and unfettered access to raw data? To what degree will the United States reciprocate by offering access to its own data? And, will United States authorities determine which data other states can access within the global network? These issues may not be so important if the only information transfer to take place within the Global Maritime Network is of an unclassified nature. But Australia's deep relationship with the United States means that a great quantity of classified data is already shared. Care will need to be taken to keep data intended for different information sharing channels separate. Moreover, legal limitations on the transfer of some information, such as commercially sensitive customs data, may remain. It is also possible that the indiscriminate vacuum cleaner approach taken by the United States, sucking up all and any MDA information possible, may not necessarily suit Australia's purposes. Does Australia actually need to access tracks of the world's entire merchant fleet and other related data, irrespective of the specific location of those ships? To follow that path would seem, at a minimum, a recipe for data overload.

Implications for the Royal Australian Navy

The main implication of the 1000-ship Navy concept for the RAN is that it should continue to do what it has been doing with regard to regional naval cooperation and capacity building. There seems to be no reason to change. In the South Pacific, Australia will continue to take the lead role in driving regional maritime security developments. In Southeast Asia, the current practice of low profile, mostly bilateral and incremental cooperation will also continue unaffected by the 1000-ship Navy. Because the prospects of establishing a regional maritime security network will remain so difficult, perhaps impossible, the RAN may need to proffer some friendly advice to their American counterparts to slow down should the USN push too strongly on this issue. In the Asia-Pacific region more widely, the WPNS will remain the leading forum for multilateral naval cooperation outside of the alliance or coalition context, although the RAN may wish to use the 1000-ship Navy to pursue deeper relationships with individual regional navies. The RAN will need to continue to take a lead in the area of capacity building. By building incrementally elements for improved interoperability, including information sharing, Australia may be able over time to establish at least the building blocks for regional or sub-regional networks.

Technologically, the 1000-ship Navy poses some challenges for the RAN, albeit familiar ones. In particular, the command, control and communications demands of conducting so-called 'maritime security operations' related to the war on terrorism will only increase. The requirement to be able to share common operational pictures

between navies (and between navies and other agencies) may be relatively easily overcome for shore-based command and control centres, but rather more bothersome for individual warships, especially legacy force structure. A singular and persistent problem for advanced navies is the lack of bandwidth available on individual ships: there can be no such thing as too much bandwidth as the demands for data transfer grow apace.[173] Retrofitting older ships may prove technically difficult, but it seems clear that the new air warfare destroyers and amphibious ships ordered in June 2007, each class of which will have significant command and control capabilities, need to be designed from the outset with growth potential in mind. The need to install a full range of information sharing platforms to be able to exchange data with a wide range of potential partners, from allies to occasional partners, and across a wide range of technological sophistication, must also be accommodated.

More generally, the RAN - and other navies - may need to consider how much of a priority they will need to place on maritime security operations over the medium to long term; that is, will the naval involvement in monitoring shipping in peacetime only be a short-term phenomenon? If such operations are deemed to be a long-term priority for navies that may influence over time the way navies are equipped and optimised. It might also pose problems if prioritising maritime security operations undercuts the ability to fulfil other roles and duties. Put another way, should the global insurgency that is the 'war on terrorism' slowly abate as a security preoccupation, will the RAN still be required to play a role in the observation of shipping?

If the maintenance of good order throughout the global maritime domain only grows in importance, though, considerable pressures may be placed on RAN force structure, and that of the Royal Australian Air Force. Even if all the necessary regional and global networks envisaged for the 1000-ship Navy eventuate, thus leveraging the multiplier effect of MDA information sharing, the sheer numbers of patrol platforms operated by participating states will remain a key to effectiveness: frigates, corvettes, OPVs, high endurance patrol boats, maritime patrol aircraft and Broad Area Maritime Surveillance UAVs. Yet in an era in which almost all Western navies are reducing naval force structures, and when armed forces must still plan and equip for contingencies across the spectrum of operations, from high-end warfighting to the most benign of peacetime operations, there remain doubts over whether there will be sufficient assets to police national offshore estates and regions where maritime security assistance is required, and perhaps parts of the high seas.

The stresses of high operational tempos and demand for the services of maritime forces, matched with shortages in platforms and personnel are readily apparent in the RAN, as with many other forces worldwide. The 1000-ship Navy may have been envisaged in part to assuage these types of concerns within the shrinking USN, but success is unlikely unless the general decline in numbers of platforms is arrested, even accounting for the growth in coast guards in some states. More important still,

states must not view the Global Maritime Partnership initiative as an opportunity to take advantage of the hypothetical benefits of networking as an excuse to make further cuts to their own force structures. Moreover, most modern navies such as the RAN have limited scope to change the balance of what are already small force structures. Prudence dictates that capabilities must be maintained, if at all possible, to cope with the entire spectrum of operations. Thus, a reconfiguration of naval force structure to focus on current concerns with maritime security operations may be unwise if warfighting capabilities were to be negatively affected.

Conclusion

In conclusion, the Global Maritime Partnership initiative seems to offer a sound organising concept with which to frame enhanced naval and other maritime security cooperation. It needs to be emphasised, though, that the concept primarily represents an intellectual and policy framework which links existing initiatives and programs and encourages the development of new ones where they are most needed, rather than a major reformulation of the practice of maritime security cooperation. The determination to develop regional maritime security networks is certainly worthy, however, especially in regions where security is sparse, such as the Gulf of Guinea or the Horn of Africa.

The development of new architectures for information collection and sharing, or at least the evolution of existing capabilities, constitutes the most significant new tangible element for enhanced cooperation. In the long run, however, the political impetus being applied to the importance of security and good order throughout the global maritime domain may be as important an enabler to achieve such objectives as the more technical development of comprehensive MDA. Whilst improved maritime domain awareness is desirable, the extent of American MDA ambitions may be questionable. The development and integration of technology for MDA purposes is both inevitable and necessary, but it is also important that maritime security requirements drive technological solutions, rather than a mission to pursue what is technologically possible driving security arrangements. However, in some regions, particularly, one suspects, Southeast Asia, technology and even security needs will likely continue to be trumped by local politics.

Underlying the rhetoric and good intentions, the concept has been driven by American fears of catastrophic terrorist attacks that exploit the maritime transportation system and the world's oceans. This is a real and important concern. Yet, if that threat proves to be epiphenomenal, will the same degree of interest persist in maintaining maritime security networks, whether regional or global?

From yet another perspective, should the processes of globalisation break down, priorities may quickly change once more to concentrate on traditional strategic concerns. Nowhere is that danger more apparent than in Asia, and especially Northeast Asia, where the possibility of a descent into war remains a constant fact of regional political life. These considerations should not serve to prevent the RAN and other navies enjoining with the US as part of a nominal 1000-ship Navy cooperative framework, but they should act as a reminder to all to remain aware of the underlying strategic challenges ahead, any of which could ultimately demote the Global Maritime Partnership initiative to a role of minor historical curiosity.

Notes

1   Admiral Mike Mullen, USN, remarks delivered at the Naval War College, Newport, RI, 31 August 2005, <www.navy.mil/navydata/cno/speeches/mullen050831.txt>.

2   Mullen, remarks delivered at the Naval War College, 31 August 2005. Admiral Mullen's promotion to Chairman of the Joint Chiefs of Staff was confirmed in August 2007. His replacement is former Commander US Pacific Fleet, Admiral Gary Roughead.

3   'RAN Joins the '1000 Ship Navy', *The Australian*, 20 November 2006.

4   Mullen, remarks delivered at the Naval War College, 31 August 2005.

5   Mullen, remarks delivered at the Naval War College, 31 August 2005.

6   See Geoffrey Till, *Seapower: A Guide for the Twenty-First Century*, Frank Cass, London, 2004, chapters 10 and 11. The concluding chapter of Till's work seems quite prescient with regard to the USN's new preoccupation with building maritime security networks, leaving one to ponder the influence of Till's work within the USN hierarchy.

7   Admiral Mike Mullen, USN, remarks delivered at the 17th International Seapower Symposium, Naval War College, 21 September 2005, <www.navy.mil/navydata/cno/speeches/mullen050921.txt>.

8   See Colonel Qiao Liang, PLA, and Colonel Wang Xiangsui, PLA, *Unrestricted Warfare: China's Master Plan to Destroy America*, Pan American Publishing Company, Panama City, 2002 (first published in Chinese in 1999). The status of the book within China is in doubt. It would seem to be an unofficial volume, although its publication by a PLA publishing house gives it some credence. The hyperbolical subtitle has been added by the English language publisher.

9   The United States in fact has a long, if not always wholly successful, history of fighting 'small wars' and irregular enemies. See Max Boot, *The Savage Wars of Peace: Small Wars and the Rise of American Power*, Basic Books, New York, 2002.

10   Vice Admiral John G. Morgan, USN, and Rear Admiral Charles W Martoglio, USN, 'The 1000-ship Navy: Global Maritime Network', US Naval Institute *Proceedings*, November 2005, pp. 14-17.

11   See, in particular, Robert D. Kaplan, 'America's Elegant Decline', *The Atlantic Monthly*, November 2007, pp. 104-116.

12   Admiral Mike Mullen, USN, edited remarks to the RUSI Future Maritime Warfare Conference, London, 13 December 2005, <www.navy.mil/navydata/cno/speeches/mullen051213.txt>.

13   For an excellent analysis of the *Seabourn Spirit* attack see Peter Lehr and Hendrick Lehmann, 'Somalia - Pirates' New Paradise', in Peter Lehr (ed), *Violence at Sea: Piracy in the Age of Global Terrorism*, Routledge, New York, 2007, pp. 1-22.

14   The White House, *The National Security Strategy of the United States of America*, March 2006, p. 46, <www.whitehouse.gov/nsc/nss.pdf>.

15   Admiral Mike Mullen, USN, remarks delivered to the Western Pacific Naval Symposium, Pearl Harbor, HI, 31 October 2006, p. 3.

16   See Chris Rahman, 'The International Politics of Combating Piracy in Southeast Asia', in Lehr, *Violence at Sea*, pp. 185-189.

17 The CSCAP Maritime Cooperation Working Group (which has since been reformulated as the CSCAP Study Group on Capacity Building for Maritime Security) has, for example, produced memoranda on maritime cooperation for consideration by the ARF Track I process. See 'Guidelines for Regional Maritime Cooperation', *CSCAP Memorandum No. 4*, December 1997, <http://aus-cscap.anu.edu.au/memo4.html>; and 'Cooperation for Law and Order at Sea', *CSCAP Memorandum No. 5*, February 2001, <www.cscap.org/documents/maritime%20 memo%205.doc>.

18 See Andrew Forbes, 'The Western Pacific Naval Symposium', in Andrew Forbes and Michelle Lovi (eds), *Australian Maritime Issues 2006: SPC-A Annual*, Papers in Australian Maritime Affairs No. 19, Sea Power Centre – Australia, Canberra, 2007, pp. 183-187; and Chris Rahman, *Naval Cooperation and Coalition Building in Southeast Asia and the Southwest Pacific: Status and Prospects*, Working Paper No. 7, Sea Power Centre – Australia, Canberra, October 2001, pp. 29-32.

19 Rahman, 'The International Politics of Combating Piracy in Southeast Asia', pp. 192-194.

20 See Rahman, *Naval Cooperation and Coalition Building in Southeast Asia and the Southwest Pacific*, pp. 39-40.

21 On this point see, for example, Peter Dombrowski's presentation on the 1000-ship Navy to the CityForum Defence Round Table, *Maritime Security - Time for a Sea Change?,* London, 18-19 September 2006.

22 A point well made in Eric Grove, *The Future of Sea Power*, Naval Institute Press, Annapolis, 1990, p. 22.

23 On the numerous ways in which terrorists can target or exploit the maritime transportation system see Organization for Economic Co-operation and Development, *Security in Maritime Transport: Risk Factors and Economic Impact*, Paris, July 2003, esp. pp. 8-18.

24 Statement of Honorable Donald C Winter, Secretary of the Navy, before the Senate Armed Services Committee, 'The Secretary of the Navy's FY2009 Posture Statement', 28 February 2008, p. 18, <www.navy.mil/features/SECNAV_Posture_Feb%202008_final.pdf>.

25 For the extended argument see Chris Rahman, 'The Evolving US Framework for Global Maritime Security from 9/11 to the 1000-ship Navy', in Peter Lehr, Sam Bateman and Rupert Herbert-Burns (eds), *Lloyd's MIU Handbook of Maritime Security*, Auerbach Publications, Boca Raton, (2008) forthcoming, pp. 39-53.

26 Mullen, remarks delivered at the Naval War College, 31 August 2005.

27 Mullen, remarks delivered to the Western Pacific Naval Symposium, 31 October 2006, p. 3.

28 Richard K. Betts, 'Systems for Peace or Causes of War?: Collective Security, Arms Control, and the New Europe', *International Security*, Vol. 17, No. 1, Summer 1992, esp. pp. 8-22.

29 See, for example, David Dewitt, 'Common, Comprehensive, and Cooperative Security', *The Pacific Review*, Vol. 7, No. 1, 1994, pp. 7-10.

30 US Navy, US Marine Corps and US Coast Guard, *A Cooperative Strategy for 21st Century Seapower*, October 2007, p. 4, <www.navy.mil/maritime/MaritimeStrategy.pdf>.

31 USN, USMC and USCG, *A Cooperative Strategy for 21st Century Seapower*, p. 16 (emphasis added).

32 On the links to the defence of the global system see, for example, Geoffrey Till, 'Maritime Strategy in a Globalizing World', *Orbis*, Vol. 51, No. 4, Fall 2007, pp. 569-575; Till, *Seapower*, chapter 11; and James Kurth, 'The New Maritime Strategy: Confronting Peer Competitors, Rogue States, and Transnational Insurgents', *Orbis*, Vol. 51, No. 4, Fall 2007, pp. 596-597.

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