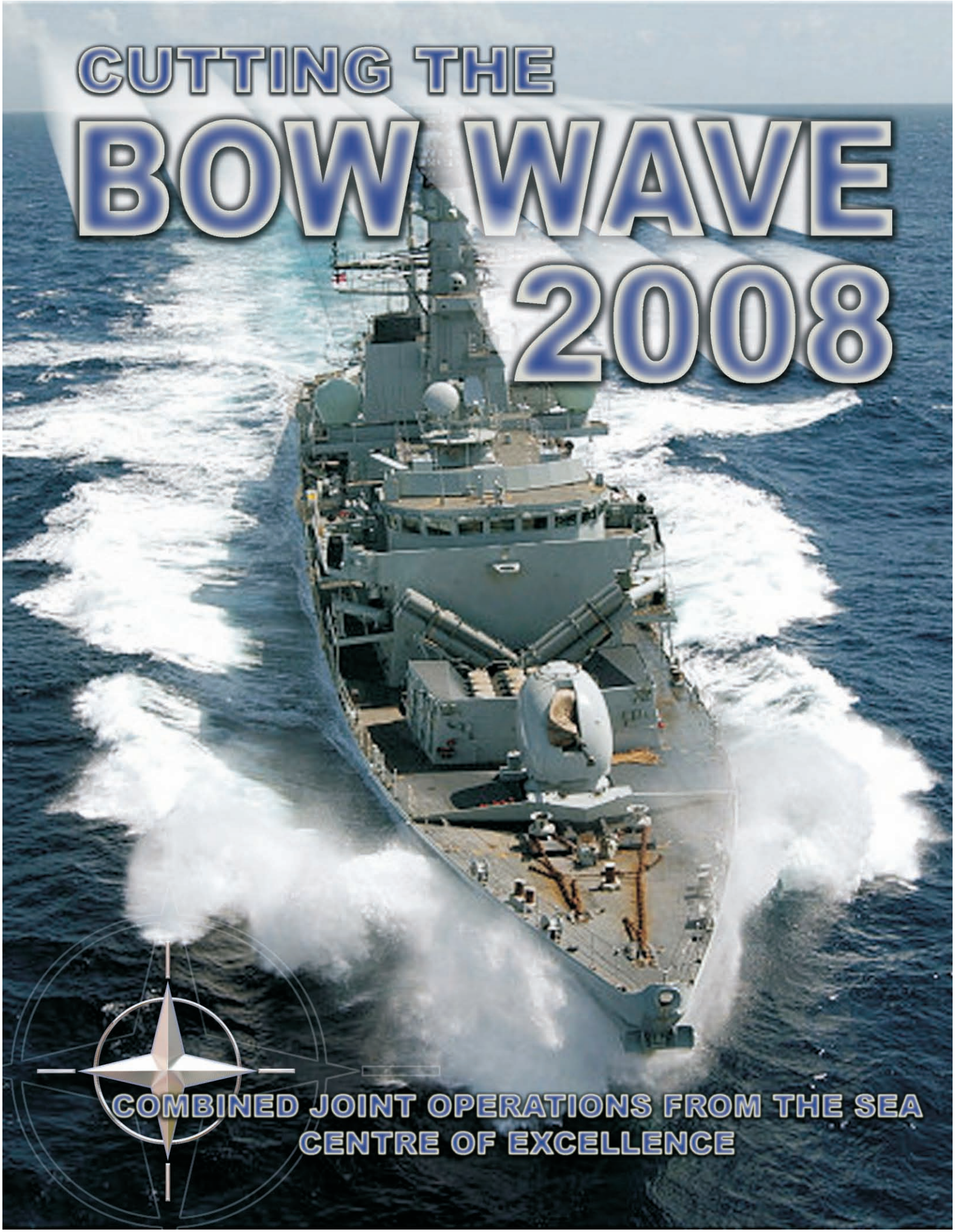
CUTTING THE BOW WAVE 2008



COMBINED JOINT OPERATIONS FROM THE SEA CENTRE OF EXCELLENCE

Director's Vision

Within 5 years, to become the pre-eminent **source of innovative specialist advice** and expertise on all Multi-National aspects of Combined Joint Operations from the Sea in support of the Sponsoring Nations, NATO and other non-NATO allies.

Our Mission

Working in conjunction with the Commander US Second Fleet, the CJOS COE will provide a focus for the **Sponsoring Nations and NATO in improving allied ability to conduct Combined Joint Operations from the Sea** in order to ensure that current and emerging global security challenges can be successfully tackled.

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Message From the Director

Vice Admiral Melvin G. "Mel" Williams, Jr., USN
Director, Combined Joint Operations From
The Sea Centre of Excellence

"Transforming Maritime
Potential into Reality"

As an organization, CJOS COE presents a collective wealth of international experiences and expertise, and an opportunity to orchestrate transformation within an Alliance. Its goal is to bring together best practices to ensure current and emerging global security challenges can be effectively addressed. This publication demonstrates the benefits of synergistic efforts of Sponsoring Nations and NATO converging to provide an infusion of pioneering ideas, concepts and capabilities. The result is a new cultural environment which has fostered the innovation required to achieve transformational and operational success.

I am very proud of the CJOS COE team and our accomplishments in 2008; I look forward with great anticipation to even more success in 2009 delivering Maritime Security in Global Partnership.

MELVIN G. WILLIAMS, JR.
Vice Admiral, U.S. Navy
Director, Combined Joint Operations From
The Sea Centre of Excellence

Editorial

Delivering Maritime Security in Global Partnership

Welcome to the first edition of the Combined Joint Operations from the Sea Centre of Excellence (CJOS COE) annual review which we have called Cutting the Bow Wave as a practical example of what mariners have sought for centuries in order to deliver improved capabilities from their ships. This booklet provides you with a summary of some of our activities from the previous year and highlights briefly what we have been tasked to complete during the forthcoming year.

The projects described in this booklet have been completed by us in support of our core mission, which is to improve allied capabilities in multi-national, joint operations from the sea. Recognizing that NATO is already extremely effective at many aspects of maritime operations, we have focused on the wider challenges of delivering effective maritime security during our first full year of work, and have been busy looking at the best ways of developing a closer working relationship with the non-military organizations so central to effective law enforcement at sea, as well as on developing better links with non-NATO allies across the world.

We are proud of our many accomplishments during 2008. We have concentrated on two focus areas: leading-edge Transformational Concepts and Future Capability Development. As such, we have actively facilitated and supported numerous national and Alliance exercises and experiments, such as the US Navy's TRIDENT WARRIOR series, focused on improving information exchange in support of maritime security, and NATO's STEADFAST Series, which supports the training and certification of the NATO Response Force. You will see in this booklet the broad range of exercises that we facilitated and you will learn how we have supported several other agecies with NATO staff officers playing key roles in HQ staffs at the Component and Joint Task Force level. Recent successful facilitation tasks in support of improved interoperability have also included the first carrier qualification operations from a US Navy aircraft carrier by Rafale aircraft of the French Navy, another significant milestone. We have also been, and remain, closely involved in all key Allied Joint warfare and maritime Working Groups, the Effects Based Approach to Operations doctrine development team and the NATO team developing Maritime Situational Awareness policy and guidance.

Capitalizing on the unique strengths and extensive operational experience of Second Fleet and its supporting commands, CJOS COE is taking forward several major collaborative initiatives, including concept development in the areas of Sea Basing, Counter-Piracy, Vertical Heavy Lift, Maritime Unmanned Vehicles, Extended Range Guided Munitions, and the multi-national and multi-agency aspects of the US Navy's Maritime Operations Center project. You will find more information on these successes in this issue as well.

Perhaps our most conspicuous success during 2008 was our inaugural maritime security conference in May at which we were fortunate to attract a range of world-class speakers including Admiral Mark Fitzgerald USN, Commander Naval Forces Europe and Africa, and Secretary General Magnus Addico of the Maritime Organization of West and Central Africa, representing 25 nations in that region who are moving forward to develop a truly effective integrated maritime security organization.

We are proud to host our 2009 Maritime Security Conference in Sorrento, Italy, 31 March – 2 April. It will focus on identifying the best practical ways of improving collective capabilities in regional maritime security through improved global coordination. Further details are inside the back cover.

I hope you enjoy reading this first edition of Cutting the Bow Wave.

Commodore Bob Mansergh
Deputy Director, CJOS COE

CJOS COE welcomes unsolicited manuscripts of 1500 words in length which will be included in a professional Journal this fall.

Please e-mail your manuscript as an electronic file in MS Word to: cjos_coe@secondflt.navy.mil

Who We Are

As military forces around the world have been transforming the way they organize, plan, train, and fight, Commander, U.S. Second Fleet established the Combined Joint Operations from the Sea Centre of Excellence (CJOS COE) May 31, 2006, to provide a focal point for Joint Maritime Operations expertise for allied nations. CJOS COE is a small team of U.S. and NATO staff officers who draw on the experience and skills within Second Fleet, and neighboring US Commands, to promote "best practices" within the Alliance and to aid NATO's transformational goals, specifically focused on maritime-based Joint operations. CJOS COE functions through close cooperation with Allied Command Transformation (ACT), other maritime COEs, NATO Joint Force Commands, and numerous national commands.

Organization Structure

CJOS is headed by Vice Admiral Mel Williams, USN, as Director, and Commodore Bob Mansergh, Royal Navy, as Deputy Director. CJOS Director of Staff Operations is Commander Jan Van Zanten, Netherlands Navy; Branch Head for Transformation is Captain Franco Fusco, Italian Navy; and Branch Head for Experimentation and Exercises is Captain Gary Hatton, Canadian Navy. In order to optimize the robust capabilities and skills among the staff, CJOS maintains a cross-functional matrix staff, with specialization in deployment/sustainment, expeditionary operations, joint maneuver, and information superiority.

How We Accomplish Our Mission

We achieve our mission by leveraging off best practice wherever we find it, moving forward quickly with innovative proposals for solutions to problems set out in the Programme of Work and by thinking transformationally. By that, we mean thinking outside the box and shortening our own decision cycles by working without the constraints of consensus. We have also worked to reduce consultation timelines between COE staff and key experts in the individual Sponsoring Nations by setting up Focal Points of Contact within some of those nations, who put us directly into contact with their relevant Subject Matter Experts. We work closely with the Transformation Network Coordination Cell in Allied Command Transformation to ensure that we do not duplicate work already underway there, or within one of the other 18 Centres of Excellence.

Tasking

Our Sponsoring Nations and Allied Command Transformation identify shortfalls in current maritime capabilities or procedures and task us to review them in our annual Programme of Work. This is then approved annually by the CJOS COE Steering Committee.

Actions to Achieve Vision

To become a pre-eminent source of innovative military advice on coalition joint operations from the sea, we intend to raise our profile by collaborating with leading-edge institutions, publish high quality products for use by NATO and the individual sponsoring nations, and validate our products through experimentation and exercising. This will be made possible by US Second Fleet providing the appropriate validation opportunities, thus giving us maximum leverage of our position in their Headquarters. We will also work with non-military authorities to raise our profile with them and help provide best practice on maritime security issues to the wider global maritime security partnership.

TRANSFORMATION IN OPERATIONAL CONCEPTS — ENHANCED EMPLOYABILITY

Global Concept of Operations

The Team facilitated a very wide range of collaborative activities during 2008. Some of the highlights are shown below and were all made possible by close engagement of CJOS COE members with the relevant national authorities.

The Royal Navy's destroyer HMS MANCHESTER and the Canadian Frigate HMCS CHARLOTTETOWN were both integrated into the USS HARRY S TRUMAN Carrier Strike Group deployment to the Indian Ocean and Arabian Gulf during the first half of 2008. They were equipped with a range of information-sharing systems which underpinned their successful integration and allowed them to be fully employed within the Strike Group on all missions required. The primary system was fitted and set to work with significant input from the CJOS COE's British Army Warrant Officer of Signals - testimony to the Joint and Combined nature of the COE.

French Rafale fighters conducted carrier landing requalifications onboard USS THEODORE ROOSEVELT during the US carrier's Composite Training Unit Exercise. They then took part in a major Joint Task Force Exercise designed to allow Carrier Strike Group 2 and Expeditionary Strike Group 2 staffs to be certified for all types of operations, including operating as an Expeditionary Strike Force. The Rafales operated from the Naval Air Station at Norfolk for this exercise, supported by two French E-2 Hawkeye Airborne Early Warning aircraft. This collaborative arrangement was set up with significant input from the CJOS COE's French staff officer and provided an excellent opportunity for cross-pollination of new ideas between French naval aviators and their US counterparts while FS CHARLES DE GAULLE was in refit.

The UK's HMS ARK ROYAL deployed to the East Coast of the United States in the helicopter carrier role and operated with USMC units to practice small scale assaults and raids, before also taking part in a Joint Task Force Exercise as a key element within the Expeditionary Strike Group. This included flying operations with USMC CH-46 helicopters, as well as embarking a small detachment of US Marines.

During the Joint Task Force Exercise, the Deputy Director of CJOS COE was designated as the Combined Task Force Maritime Component Commander for a Strike Force of over 30 major warships, as well as a large number of naval strike aircraft and a detachment from Navy Expeditionary Combat Command who were put ashore to support port security, and to clear ordnance from blocked harbor entrances. Working for the US Navy Joint Task Force Commander, he fulfilled this role with the added benefit of his strong coalition understanding.

The Italian Air Independent Propulsion submarine TODARO and the French nuclear powered attack submarine AMETHYSTE were also involved in the Joint Task Force exercise and subsequent east coast port visits, all of which were coordinated with inputs from CJOS COE members.

In addition to facilitating this operational and exercise activity, CJOS COE members helped organize numerous ship and submarine visits as well as visits by senior allied officers. The ship visits included those of the Dutch diesel submarine HNLMS WALRUS and the new guided missile frigate HNLMS ZEVEN PROVINCIEN, 28-29 October 2008.

Enhanced Network Sea Basing

CJOS COE worked extensively on linking the hypothesis of Sea Basing to the realities of withdrawal from Iraq, in an attempt to identify how support to the Iraqi security forces might be continued most effectively after the UN Security Council mandate ran out at the end of December 2008. CJOS COE is now in the process of producing a more generic answer which will examine the role of Sea Basing in support of Strategic Overwatch (anticipated for publication late March 2009). It is summarized below and highlights many of the advantages of Sea Basing, which have so far gone largely unrecognized in current operational thinking.

The ultimate aim of a global military posture for an individual nation, a coalition of nations, or an alliance of nations is to achieve advantages in strategic reaction time, geographic positioning of forces, force concentration and support. Together they contribute to a favorable strategic balance which serves as the driver for a stable security environment. The uncertain security environment of the 21st Century points to a need for expanded expeditionary capabilities that allow rapid response to a wide range of missions from humanitarian to direct military action.

Today we can identify four types of security challenges: traditional, irregular, catastrophic, and disruptive, each with a unique set of capability requirements. Changes in security challenges require appropriate adjustments in military force structure and capability. This is typically accomplished through a rigorous process of transformation which calls for increased effectiveness and efficiency. This transformation is well underway, as threat-based response forces of the Cold War era are being replaced by capabilities-based forces that are better able to adjust to the full spectrum of military missions. The number of troops or weapon platforms is no longer the key metric. Rather, military effectiveness is now a matter of capabilities – speed, stealth, reach, knowledge, precision, and lethality.

Sea Basing has been identified by many nations as a critical capability necessary to address current and future security challenges for expeditionary operations. The need to rapidly project task, or mission-tailored forces to remote or austere crisis areas, and the ability to sustain those operations for indefinite periods are clearly emerging requirements when viewed in the context of recent world events, ranging from natural disasters to transnational terrorist attacks. Sea Basing, an emerging transformational concept, can potentially provide the capability to deal with growing anti-access/area denial challenges. It is more than bringing forces to the fight on ships; Sea Basing utilizes the maneuver space of the sea to provide a secure base of operations that allows for the movement, surprise, tactical flexibility, and full spectrum support of joint / multinational /interagency forces. It also ensures that the risks of "embroilment" are minimized and the military footprint on the ground, which is possibly creating more insurgents and terrorists than it is deterring, can be minimized without sacrificing strategic influence and control. In simple terms, it is delivering Joint military capabilities from the sea which would conventionally be delivered from the land through secured ports and airfields.

CJOS' study paper, entitled "Sea Basing: The Tool of Choice for Strategic Overwatch", will evaluate the effectiveness of Sea Basing in supporting a "generic" Strategic Overwatch scenario. The generic scenario includes a range of key elements including: humanitarian assistance / disaster relief, non-combatant evacuation operations, peace keeping, peace enforcement, focused intervention and deliberate intervention. Although Sea Basing is touted as having a wide range of applications across the Range of Military Operations , there is also the perception that it comes with a high investment of resources and expenditures; this is not the case. The study paper will also assess where Sea Basing is least and most effective to better inform nations how to commit limited resources, and provides key conclusions to compliment NATO's Joint Sea Basing concept while strengthening US proposals for a long term Global Defense Posture particularly in the Middle East and Southwest Asian regions.

Extended Range Guided Munitions

CJOS COE has also worked extensively on Extended Range Guided Munitions (ERGM) this year. Responding to a task from Allied Command Transformation (ACT), CJOS COE has analyzed the potential impact of ERGM on NATO Operations and on Tactics, Techniques and Procedures. The study was finished in late 2007 and a CJOS paper with its findings, entitled 'Extended Range Guided Munitions (ERGM) Impact on NATO Operations and Tactics, Techniques and Procedures', was released in January 2008.

As part of their Operational Maneuver from the Sea (OMFTS) doctrine in the early 1990s, the United States Marine Corps developed a new supporting concept entitled Ship to Objective Maneuver (STOM). Contained within this new concept was a "mission needs" statement for vastly improved Naval Fire Support capabilities. Long-range accurate fires from the sea were identified as an essential prerequisite for fully capitalizing on the STOM concept, but the capabilities available at the time fell well short of the requirement. ERGM is one of several initiatives launched to close the capability gap identified and to accommodate this new requirement to enhance existing Naval Fire Support.

The increased range and accuracy of ERGM will also lead to the most significant change in the near-term future enhancements of Naval Gunfire capabilities. The successful fielding of ERGM will no longer limit Naval Gunfire Support to amphibious operations and near coastal areas, but rather it will enable Naval Gunfire to provide effective complementary fires in support of prolonged joint combat operations, well beyond a landing beach, or littoral penetration point.

Among NATO nations, the United States and Italy are in the forefront of developing ERGM systems. While still in early development, ERGM are expected to be operational and fielded to naval forces by 2011. The expected fielding of ERGM will bring an enhanced capability to Naval Gunfire Support. It is anticipated that ERGM will become more frequently used in Joint Fires Support, with a subsequent demand for increased coordination throughout the Fire Support chain. With the introduction of ERGM, there will also be an increased need for Joint Fires Support doctrine in NATO, while minor changes to existing doctrine will have to be incorporated to take account of ERGM requirements.

INFORMATION SHARING AND COLLABORATIVE PLANNING

CJOS COE Maritime Security Conference 2008

CJOS COE partnered with the Confined and Shallow Water Centre of Excellence in Kiel, Germany and the NATO Undersea Research Centre in La Spezia, Italy, to host its inaugural Maritime Security Conference in May 2008. The theme of this conference was "Delivering Maritime Security in Global Partnership". This reflected the recognition that a range of seemingly insurmountable challenges had hitherto hindered effective information sharing and collaborative planning and execution in the pursuit of maritime security on a global scale.

In a two and a half day program that captured the interest and attention of a very diverse and knowledgeable audience, a collection of noted experts, civilian and military, was put together to provide focused and up-to-date presentations. Expert panels were formed to address issues relating to: the structuring of a global maritime information sharing environment; the examination of future technologies to counter emerging maritime threats; and the complexity and magnitude of port, harbor, and inland waterway security issues. Keynote speakers Dr. Norman Friedman, who provided an address titled "An Increasingly Maritime World," and Admiral Mark Fitzgerald, US Naval Forces Europe, addressing "Maritime Security in the Globalized World," provided the general background and context that supported the follow-on analysis and discussion of maritime security and partnership issues on a global scale.

A think-piece entitled "Structuring a Global Maritime Information Sharing Environment" was circulated to all conference attendees before the event, and used as a baseline reference for the presenters and panelists. Conference attendees then discussed maritime security and global partnership issues from a wide range of organizational and cultural backgrounds, ultimately converging ideas and agreeing, in principle, on possible solutions.

One of the stated objectives of this inaugural conference was to attract a wide range of maritime security experts from both military and non-military communities in order to facilitate an open and inclusive forum for examination, idea sharing, and discussion. The distinguished speaker line-up consisted of an equal number of military and non-military members. Conference attendees represented twenty-one different nations, with seven non-NATO nations participating. While the majority of attendees were military, approximately seventeen percent of the audience was from the non-military community, creating a well diversified collaborative synergy.

Building on the success of this first conference, CJOS will return to Sorrento, Italy with the second Maritime Security Conference to be held 31 March – 02 April, 2009. Goals of the 2009 conference include highlighting further developments in regional maritime security partnerships, and information sharing standardization initiatives which are currently underway, updating attendees on policy developments in specific areas of topical interest such as the Integrated Coast Guard initiative, recently signed off by the Maritime Organization of West and Central Africa under the auspices of the International Maritime Organization, and addressing emerging policies for countering piracy in the Gulf of Aden and western Indian Ocean.

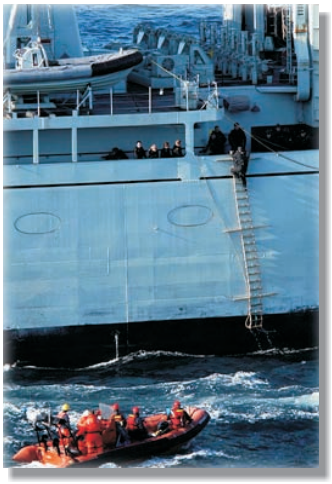
Delivering maritime security and building effective global partnerships remain at the forefront as Navies around the world transform the way they organize, plan, train, and fight. CJOS COE is pleased to host the 2009 conference, "Delivering Maritime Security in Global Partnership: Improving Collective Capabilities," and the Director and staff hope to welcome you in Sorrento.

Details on the 2009 conference may be found at:
www.cjoscoemaritimeconference.org

Civil-Military Fusion Centers, Partnering with the Inter-Agency

CJOS COE priority one task for 2008, apart from the Conference, was to identify how to achieve interoperability with the non-military community involved in maritime security. The results of CJOS' analysis will be published in March 2009 in a paper which recommends that the interim solution to the challenges of interacting effectively with the Inter-Agency community in delivering maritime security should be to establish civil-military fusion centers in which "trusted experts" from the relevant non-military authorities work alongside military officers, to overcome the information sharing challenges and cultural and procedural differences which have hitherto prevented effective collaboration.

Live Exercises at Sea



CJOS' approach to improving interoperability started in 2006. To begin, CJOS COE first worked on integrating foreign units into US Navy live exercises at sea. Whether in the 'initial' Composite Training Unit Exercise (C2X) or the 'advanced' Joint Task Force Exercise (JTFEX), coalition units are now playing a very active and useful role in the certification of the USN strike

groups. Participation is in the best interest of all the nations, so CJOS COE takes great care to maximize training opportunities in support of national and coalition training requirements. Past participation includes JTFEX 06-2, a premiere for a French fast attack submarine, including Water Space Management and Command and Control issues. In May 2007, the new French amphibious assault helicopter carrier, FS TONNERRE, was certified in the use of Landing Craft Air Cushion vehicles and heavy USN helicopters. JTFEX 08-4 was a similarly unique event with the full Rafale fighter squadron from the French Navy embarked in the USN carrier for combined joint air operations. This February, the FR amphibious carrier returned to the US East Coast to embark USMC combat tanks into the USS BATAAN Expeditionary Strike Group for their Composite Training Unit Exercise, demonstrating the progress which has been made in Allied interoperability. Today, several British, Canadian, and French units are participating on a regular basis in live exercises.

A second type of exercise, the FRONTIER SENTINEL series, is designed to evaluate US Navy, US Coast Guard, and the Canadian Joint Task Force–Atlantic planning capabilities and interoperability standards at the operational level during simulated Maritime Homeland Security (MHS) events. Each year these three entities work together, in various different threat scenarios related to MHS on the Atlantic Coast, to evaluate, analyze, and improve interoperability standards and methodologies in the accomplishment of time sensitive maritime missions of an interest to all. CJOS COE personnel have participated in these events to provide multi-national expertise in the planning of operations, as well as to provide impartial and unbiased feedback on the working relationships and methods of information sharing observed during the execution of these exercises.

Likewise, during Exercise PANAMAX 07, which was the exercise event that provided the scenario and backdrop for Commander Second Fleet's (C2F) certification as a ready Joint Task Force Headquarters, CJOS personnel were integrated into the C2F staff. Working within the Operational Plans Future Operations Cell, CJOS COE staff members were able to offer a unique multi-national point of view during the planning for operational actions that is not routinely present within the staff. Drawing on the professional backgrounds and unique specialties of a diverse staff, CJOS was able to offer C2F a wide variety of expertise in multi-national operations that in itself is an example of attention to interoperability issues and consideration of Allies and partners during Operations. Following PANAMAX 07, CJOS COE personnel were once again asked to augment the C2F staff for embarked operations during JTFEX08. Deployed on the USS BATAAN, CJOS COE staff members were integrated into the afloat headquarters structure, which provided significant value to the exercise.

Together with our Reserve detachment, we also provided a valuable contribution during the preparation and operational phases of three major NATO exercises: STEADFAST JACKPOT, JAW, and JUNCTURE during 2007-2008. A team of five subject matter experts supported the scripting of JAW, and expertise was provided to the SHAPE Operational Preparation Directorate to support evaluation of the Joint Headquarters in Naples and Lisbon.

In February of 2008, CJOS COE spearheaded an additional effort to involve coalition forces in an experiment called Maritime Domain Awareness (MDA) Simulation Experiment 08 (SIMEX 08-1). It was the first participation by coalition partners in this annual series of experiments. The experiment was sponsored by the Office of Naval Research and the Office of Global Maritime Situational Awareness, and conducted between the Naval Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) Experimentation Lab in McLean, VA (simulating a MOC Current Operations Cell) and a SIMEX Policy Cell. The SIMEX involved operators from Second Fleet, the Office of Naval Intelligence, and the US Coast Guard managing MDA operations from the Maritime Operations Center. CJOS COE provided coalition representatives from Canada and the UK to the SIMEX Policy Cell. The primary objectives of this SIMEX were to examine MDA Policy issues (barriers to communication) and to investigate MDA C4ISR processes.

CJOS COE will continue to optimize the expertise of multi-national forces in exercises in order to improve interoperability and glean greater understanding of mutually supporting maritime capabilities.

Maximizing Efficiencies of Fleet Synthetic Training

In addition to setting up and supporting activities at sea, CJOS COE has worked closely with C2F and his subordinate executive agent for training, Commander Strike Force Training Atlantic, to expand the Fleet Synthetic Training (FST) initiative. The principal objective of FST is to maximize the benefit of time at sea by training as much as possible while in port so that sea time is most efficient. FST involves a very complex network of simulators or combat systems. By means of these systems, participants at the strategic, operational, and tactical levels are able to train independently or together. The UK and Germany were the

first to join, and through CJOS COE efforts, Canada and France are now participating on a regular basis. (December 2008 was the first time an Allied Carrier Strike Group staff participated remotely from Toulon, France.)

However, it is not only individual nations that have been successfully integrated. A full NATO command, Striking Force NATO, was able to support the Combined Force Maritime Component Command (CFMCC) staff in a US-based facility in summer 2008. They intend to take on the CFMCC role in their own right in 2010. Other NATO commands (such as the Maritime Component Commands) have shown interest in using FST capabilities for their own training. Italy, Turkey, and Spain are on the list as future participants. CJOS COE will continue to act as a conduit for Allied partners to join the US FST world.

Providing NATO Operational Expertise

CJOS COE staff is also a regular contributor to the PURPLE LIGHTNING series of exercises. These are twelve-hour, faculty-guided planning exercises conducted by the US Joint Forces Staff College (JFSC) during Phase II of Joint Service Officer qualification training. They reinforce the initial steps necessary to derive a mission statement, commander's intent (end state), and concept of operations for a crisis in a developing country. CJOS COE members attend the exercise to play the role of Military Liaison Officers for their countries, joining a coalition attempting to end the crisis. Inclusion of CJOS COE personnel in the exercise helps build coalition spirit. CJOS COE works in close consultation with JFSC to make the involvement of the international staff more meaningful and to add significant value to the exercise.

FILLING THE GAPS IN DOCTRINE

Maritime Counter-Piracy Experimental Tactic (EXTAC)

In November 2008, CJOS COE was tasked to analyze current piratical activity and provide recommendations for NATO in doctrinal format. In March 2009, CJOS COE completed the draft version of a "Maritime Counter-Piracy Operations" EXTAC to provide tactical guidance to NATO maritime forces. An initial draft was presented to the NATO Maritime Operations (MAROPS) Working Group in January 2009, and was received positively. Critiques and suggestions continue to come in from MAROPS nations.

Following further refinement, CJOS will present this guidance, for use as a mission-enhancing resource to NATO Maritime Counter Piracy operating forces. The purpose of this EXTAC is:

- To provide guidance to NATO and Allied forces engaged in Maritime Counter Piracy (MCP) operations, including knowledge of MCP principles, objectives and methods for achieving those objectives at the tactical or operational level.
- To lay out tactical recommendations as tools for MCP forces.
- To provide guidance on deterring piracy at the tactical and operational levels; and
- To enhance international cooperation and interoperability by providing a source of potential actions to employ against piracy, a common vocabulary, and a common understanding of the issues and challenges of MCP operations.

SYNCHRONIZING WORK AND PRODUCTS ACROSS INFORMATION AND OPERATIONAL DOMAINS

Lessons Learned

Noting that the Joint Analysis and Lessons Learned Center in Lisbon is overloaded with analysis from land and air operations in Afghanistan, CJOS COE has been collecting observations and best practices with a maritime emphasis, and making them known and accessible, in order to help the NATO maritime community stay connected and informed about best practices and lessons learned (LL). We emphasize the value and necessity of information sharing, and try to enhance coalition interoperability. To this end, we have formally proposed an "Information Sharing Initiative," and have attempted to refocus thinking from "need to know" to "need to share."

We have also created, and are expanding, a maritime Lessons Learned web portal. The goal is to link users and LL repositories, to provide a simple point of access to maritime lessons learned for operating forces and planners, and to highlight selected best practices. CJOS is not a lessons learned repository, nor is it an overseeing entity to ensure implementation of lessons learned. It is, however, a lessons learned facilitator, collecting observations and providing 'reachback' to users. CJOS emphasizes process solutions over technology solutions in the area of best practices and lessons learned.

CJOS COE has advocated a process which, while it incorporates a historical perspective, makes LL relevant to the present. This means asking how problems were resolved or operations were made more efficient or effective, determining how such results were achieved, and duplicating the best practices that work.

Information Sharing and Allied Decision Superiority in a Network-Centric Era

To meet evolving challenges in the combined joint maritime operational environment concerning Information Management (IM) / Knowledge Management (KM), CJOS COE has proposed several top-level schemes for implementation.

To the extent that essential information drives the architecture and design of interoperable IM/KM systems, CJOS assessed that NATO should not design such systems without reaching consensus as to the types of information critical to combined joint operations. CJOS also concluded that consensus must be reached over the following:

1. Those elements of information and the associated sharing and management processes which are essential for success,

2. A framework conducive to operational planning (deliberate and/or contingency), including provisions for interoperable systems and procedures for sharing essential elements of information, and;

3. A framework within which a successful IM/KM plan can be implemented, taking into account current operational doctrine, current and anticipated technologies, manpower, and security.

The NATO Joint Warfare Centre (JWC) in Stavanger, Norway produces a series of handbooks to support headquarters staff as part of the consolidated training and education provided to NATO officers and others. The theories and practice of Information Operations (IO) have been an evolving process within NATO since 2001, and, after a seven year delay, are only now reaching consensus. To mitigate the effects of this delay, the JWC asked CJOS COE to support the development of a best practice handbook for Information Operations. A year-long process of consultation, review and drafting began, during which whole chapter contributions and extensive editorial advice were provided by CJOS. The result is an excellent reference handbook, not only for those with direct responsibility for IO, but also for those seeking a basic understanding.

Streamlining Maritime Situational and Domain Awareness

CJOS COE has been actively involved all year in helping to produce a more coherent and streamlined approach to Maritime Situational and Domain Awareness. The US Joint Staff began work to define threats to and from the maritime domain with a workshop designed to bring together maritime expertise, looking forward to 2028. A future capabilities workshop was subsequently held, to identify capabilities needed to deal with a multitude of threats and potential risks. A draft MDA-Joint Integrated Concept (JIC) was produced by pulling together the wisdom of various groups and other experts. This document will inform the Joint Staff and Chief of Naval Operations when developing the Program Objective Memorandum (POM) bids for the years out to 2028.

The US Maritime Operations Center (MOC) was established to overcome perceived lack of Operational Level thinking and capability in the US Navy. CJOS COE was invited to provide expertise in 2006 and has done so ever since; bringing multinational perspective to the project to ensure that coalition ideas are considered by the US Navy when addressing challenges. Over the past two years CJOS has advised the team and provided source documents relating to non-US maritime security projects and initiatives. The draft Maritime Operations Center Confederation Initiative (MOCCI) concept (draft) was written as part of this project support, ensuring a lasting product, the principles of which have been used by NATO ACT, as well as the US Navy.

Conclusions

Much of the facilitating activity completed by CJOS COE in 2008 has been designed to allow rapid and efficient deployment of allied ships and aircraft with US forces and in a wider global partnership.

The Programme of Work 2009 is even more focused than its predecessor. The 28 personnel of CJOS COE are working hard to provide support to ACT in transforming NATO's maritime capabilities. CJOS enjoyed extensive success in 2008; its products have been well received, and the team looks forward to going from strength to strength in the coming year.

ONGOING PROJECTS AND 2009 OUTLOOK

CJOS COE Programme of Work 2009 is focused around four main tasks:

- Completion of a draft Experimental Tactical document (EXTAC) on countering piracy;
- Production of a NATO Roadmap for Maritime Unmanned Vehicles and Systems;
- Delivery of a successful annual maritime security conference in late March; and
- Delivery of further work on the Sea Basing concept in support of NATO Joint Sea Basing, as well as development of the concept within the US Navy.

CJOS COE is also standing by to assist Allied Command Transformation (ACT) to produce a Maritime Security Operations concept for NATO, and a new Maritime Strategy, if directed. CJOS COE continues to support a range of major exercises and experiments, including the TRIDENT WARRIOR series which will be run on the US East Coast in 2009. This year, TRIDENT WARRIOR will add an experiment titled Operational Level Command and Control (OLC2) and will include participation by US Second Fleet, US Fourth Fleet, US Sixth Fleet, Canada, Finland, France, Maritime Component Commander (MCC) Naples, MCC Northwood, Portugal, and the United Kingdom with observers from ACT, Sweden, Turkey and the Maritime Organization of West and Central Africa (MOWCA). MOWCA represents 25 nations with a common interest in creating a centralized regional database and data interchange system linking them all. It will also be accessible to the general maritime industry, making it a truly collaborative and interoperable event.

Biographies

Vice Admiral Mel Williams, Jr, US Navy, is a Nuclear Submarine Officer, with joint and multinational operational experience in submarines, a Carrier Strike Group (Chief of Staff) and other joint assignments. He is also qualified as a Naval Aviation Observer (Gold Wings). His service includes Operations DESERT STORM and ENDURING FREEDOM. He assumed his current assignment as Commander U.S. Second Fleet and Director CJOS COE in August 2008.

Commodore Robert Mansergh, British Royal Navy, is a nuclear submarine officer with extensive experience in submarine warfare; he has served on major Fleet and Joint staffs. A man of innovation, he led the conceptual development phase of the Fleet Future Integrated and Rationalised Structure Team's work, to deliver a new, output-focused Fleet Headquarters at Whale Island. He was then appointed Director of Naval Intelligence Collection. In 2002, he became the Deputy Director of a coalition planning and assessment team for ENDURING FREEDOM where he was responsible for the long-term strategy for Afghanistan and East Africa. He was appointed to his current assignment in August 2007 and is the CJOS COE Deputy Director.

Commander Rick Adside, US Navy, is a Supply Corps Officer who has made three deployments in support Operation ENDURING FREEDOM with a Joint Task Force. He has expertise as a Joint Operations Planning and Execution System (JOPES) and Logistics Planner, and Strategic Mobility Operations Officer. He is the Deployment and Sustainment Section Head.

Commander Edinel Ailiesei, Romanian Navy, served as chief engineer on board a fast attack craft (torpedo). His expertise is in logistics planning where he has served on headquarters staffs in Romania as well as US Central Command. He is assigned to the Deployment and Sustainment Branch.

Commander Per Bakke, Royal Norwegian Navy, held several positions in the Coastal Artillery, and Second in Command of Nes Fortress, and Commanding Officer of Coastal Ranger Commando at Harstad. Additional assignments include Commander Naval Forces South Norway, Chief of Naval Staff in Oslo, and National Joint Headquarter at Stavanger. He is the Expeditionary Operations & Joint Manoeuvre Section Head.

Commander Rogério Brito, Portuguese Navy, is a "Fuzileiro" (Marine's Portuguese name), but spent almost 2/3 of his career in a Special Operations Unit (DAE - Special Action Detachment). He participated in several missions and exercises related with Direct Action (hostage rescue, sabotage, and CSAR), Special Reconnaissance and Noncompliant Boarding (counter-drug operations). As a SOF element member, he is qualified as a Combat Diver, Free Fall Jumper and an EOD. Currently he is the lead on the CJOS COE Amphibious Force Anti-Asymmetric Warfare Operations Study and is assigned to the Transformation Section.

Warrant Officer Class 2 Steven R. Binks, British Army, serves in The Royal Corps of Signals where he holds the appointment of Yeoman of Signals (YofS). As a Communication & Information Systems (CIS) manager, he provides advice for maritime coalition CIS integration into US deployments. Currently, his main effort is developing a technical platform for collaboration between a number of US and non-US Maritime Operations Centers (MOCs) in support of the Operational Level Command & Control (OLC2) experiment. He is assigned to the Information Superiority Section.

Lieutenant Colonel Antonio "Cash" Casuscelli, Italian Air Force, is a Navigator/Weapons System Officer who has participated in numerous operations (DESERT STORM, SHARP GUARD, and ALLIED FORCE OPERATION KOSOVO) and international exercises (Red Flag, Coalition Green Flag, Allied Action 04, and Noble Javelin 05). Currently, he is leading the CJOS COE Maritime Unmanned System Study Project. He is assigned to the Expeditionary Operations & Joint Manoeuvre Section.

Commander Marcia Coleman, US Navy, is a Supply Corps Limited Duty Officer and qualified Supply Corps Surface Warfare Officer and Naval Aviation Supply Officer. She expertly manages the department's budget and finances, and coordinates travel. She is the Branch Fiscal Officer.

Commander Guillaume Delaroche, French Navy, graduated from the Naval Academy and qualified as a tactical coordinator flying the Maritime Patrol Aircraft Atlantique II. He has specialized in 'above the surface' warfare, serving on the AAW destroyer CASSARD and aircraft carrier CHARLES DE GAULLE engaged in operations in the Indian Ocean. He commanded the patrol boat LA RIEUSE in 2001 and is selected for command in 2009. He is the Exercise Section Head.

Commander Gary Fletcher, US Navy, is a US Navy Reservist, qualified Surface Warfare Officer, and designated Intelligence Officer, with three years experience in NATO including tours at ACT and the NATO Training Mission Iraq. He has spearheaded CJOS Lessons Learned, including the Information Sharing Initiative, and is currently focused on developing NATO tactical guidance for Maritime Counter-Piracy Operations. He is assigned to the Exercise Section.

Commander Jesse Fox, US Navy, is a US Navy Reservist and pilot who has extensive operational experience to include Operation SOUTHERN WATCH and Operation DELIBERATE FORCE. He recently served on the US Joint Force Command's Staff as a Strategic Planner and Deputy Branch Chief of Special Operations. Currently he is the lead for the CJOS COE Sea Basing initiative. He is assigned to the Deployment and Sustainment Section.

Captain Franco Fusco, Italian Navy, completed his Executive Officer tour on ITS GRANATIERE and Commanded the 54th Minehunters Squadron. His expertise includes Section Chief in the Plans Division at the Italian Fleet Headquarters working on NATO and multinational programs and cooperation, Chief of staff of CTF 150 in Operation ENDURING FREEDOM and a tour at SHAPE during which he also was the SHAPE representative and instructor of the Command and Control Course at Oberammergau. He is the Transformation Branch Head

Commander Pierre Granger, US Navy, is a qualified Helicopter Pilot. He is currently working on US Maritime Domain Awareness, NATO Maritime Situational Awareness, and Maritime Headquarters issues. He is the Experimentation Section Head.

Captain Gary "Doc" Hatton, Canadian Navy, is a Post Major Command Surface Warfare Officer who has joint experience assigned to the staff of US Central Command supporting Operations DETERMINATION and DESERT FOX, and was later part of Allied Coalition Naval Forces as Flag Captain and Deputy Commander of Task Force 151 supporting Operation APOLLO and ENDURING FREEDOM. He is a Strategic and Theater Anti-Submarine Warfare Specialist and is the Exercises & Experimentation Branch Head.

Commander Margaret "Peg" Hoskins, US Navy, is a Joint Service Officer and Human Resources Specialist. She received her credentials as an Assistant Professor at the Joint Forces Staff College in joint operational planning. She is a member of the Maritime Counter-Piracy Operations team and coordinates JFSC Purple Lightning Exercise. She is assigned to the Experimentation Section.

Commander Dimitrios Kouteas, Greek Navy, graduated from the Hellenic Naval Academy on 1988 and completed his tour as Commanding Officer of a Mine Sweeper after several tours on Frigates. He participated in multiple NATO operations and exercises, in the Mediterranean Sea, Adriatic Sea, Black Sea and Red Sea, (DESSERT SHIELD, DESSERT STORM, SHARP GUARD, COOPERATIVE PARTNER, DYNAMIC MIX). He has also been appointed twice, as Staff officer in the MoD/Hellenic Navy General Staff HQs and several times as National representative of the Hellenic Navy to other NATO - cooperative organizations and NATO Working Groups and has vast experience in planning and conducting political-military affairs. His projects include Decision Superiority, Maritime Unmanned Systems and Interoperability. He is the Information Superiority Section Head.

Lieutenant Colonel Pat McAdam, Canadian Army, is an Infantry Officer. A graduate of the United States Marine Corps Command and Staff College, he is a former Canadian Forces Liaison Officer to the United States Marine Corps. He is lead CJOS COE maritime conference planner and is currently working on a study on the placement of inter-agency personnel within a military headquarters. He is assigned to the Expeditionary Operations and Joint Manoeuvre section.

Commander Tanzer Orsak, Turkish Navy, is a graduate of the Naval Academy and submariner who has served for 17 years on board submarines in various duties, including a command tour of three years. His other assignments include a fire control systems instructor position in the Submarine Training Center and a six month tour in Kabul Multinational Brigade, Afghanistan as a Civil Military Cooperation (CIMIC) operations officer. He is assigned to the Exercise Section.

Commander Diego Molero, Spanish Navy, is Systems Analyst and Joint Staff Officer. He was assigned to the US Central Command Staff for Operation ENDURING FREEDOM, and NATO Headquarters in Madrid and High Readiness Forces (Maritime) Headquarters Madrid. He has been working on the Maritime Headquarters with Maritime Operations Cell (MHQ w/MOC) and Maritime Situational Awareness projects. He is assigned to the Experimentation Section.

Lieutenant Colonel Hubert Neumaier, German Army, is a Subject Matter Expert for Asymmetric/Irregular Warfare, Expeditionary Operations and Special Operations Forces, and is currently working on concept development in Maritime Unmanned Systems. He is a member of the Maritime Counter-Piracy Operations team and is assigned to the Expeditionary Operations & Joint Manoeuvre Section.

Commander Tanzer Orsak, Turkish Navy, is a graduate of the Naval Academy and post command submarine officer. His other assignments include a fire control systems instructor position in the Submarine Training Center and a six month tour in Kabul Multinational Brigade, Afghanistan as a Civil Military Cooperation (CIMIC) operations officer. He is assigned to the Exercise Section.

Lieutenant Commander Dai Roberts, British Royal Navy, joined the CJOS team as an Exercise Section Desk Officer with a specialist background in Information Operations, Air Defense and Operational planning. He has supported several major projects including the Joint Warfighting Center Information Operations Handbook, USN Maritime Headquarters with Maritime Operations Cell, US Joint Integrating Concept for Maritime Domain Awareness, and the Maritime Operations Center Confederation Initiative concept. He has been requested as a mentor for several NATO Joint exercises as well as training courses at the NATO School. He is currently busy with the NATO Synthetic Training Project –Snow Leopard and development of a New Maritime Security Operational Concept for NATO. He is assigned to the Exercise Section.

Commander Kent Shuford, United States Navy, is a Navy Reservist, a trained Airborne Mine Warfare Helicopter Pilot and an expert in airborne logistics and heavy lift, having served as the lead airborne logistics planner for Combined Task Force 51.5 during Operation IRAQI FREEDOM. He has been involved in the Sea Basing project, Navy Expeditionary Combat Command capabilities and NATO doctrine review, and has worked closely with US Second Fleet on the US Navy Vertical Heavy Lift project. He is assigned to the Maritime Unmanned Systems project team and serves as the command web master. He is assigned to the Information Superiority section.

Commander Jan van Zanten, Netherlands Navy, is a Principal Warfare Officer both Surface and Sub Surface trained. He is qualified as a specialist in Naval Mine Counter Measures and executed several real world Mine clearing operations as Mine Warfare CDR. He is responsible for all administrative matters, internal management, the annual Programme of Work, relations outside the CJOS COE, and is the Liaison Officer for Netherlands Navy ships visiting the US East Coast. CDR van Zanten is assigned as Director of Staff Operations (DOSO).

CJOS COE

MARITIME CONFERENCE 2009

COMBINED JOINT OPERATIONS FROM THE SEA CENTRE OF EXCELLENCE

MARCH 31 - APRIL 2, 2009 SORRENTO, ITALY

Delivering Maritime Security in Global Partnership: Improving Collective Capabilities

The aim of this conference is to build on our successful May 2008 conference by highlighting further developments in regional maritime security partnerships around the world. The conference will also focus on the information sharing standardization initiatives which are currently underway and update attendees on policy developments in specific areas of topical interests such as the Integrated Coast Guard initiatives recently signed off by the Maritime Organization for West and Central Africa under the auspices of the International Maritime Organization and the emerging policies for countering piracy off Somalia. At the end of the conference, attendees should have a better understanding of the regional maritime security initiatives already underway and those that represent "Best Practice". They should also understand fully how they may engage further in Global Maritime Security.

Visit www.cjoscoemaritimeconference.org to register.
For more information phone 919-954-1633

Delivering Maritime Security in Global Partnership: Improving Collective Capabilities

Proposed Schedule of Events:

Monday, 30 March 2009

1930 - 2100 *Social/Ice Breaker*

Tuesday, 31 March 2009 - Global Situation....Global Coordination

0800 - 0815 *Welcome Address*
VADM Mel Williams - Dir CJOS COE

0815 - 0845 *NATO's Emerging Maritime Security Strategy*
ADM Luciano Zappata, DeputySupreme Allied Commander Transformation

0845 - 0915 *Follow-up from 2008 Conference*
CDRE Bob Mansergh - DDIR CJOS COE

0915 - 1015 ***Keynote Address**: Building a Globally Co-ordinated Maritime Security Partnership*
Mr. Chris Trelawny - Head Maritime Security Section IMO

1045 - 1130 *NATO's Increasing Contribution as a Regional Military Organization with Global Interests*
VADM Pim Bedet - Dep Comd CCMAR HQ Northwood

1130 - 1215 *Collective Military and Non-military Response to EU Maritime Security Concerns*
CAPT(N) Isto Mattila, Finnish Coast Guard

1330 - 1415 *Commercial Shipping and Industry: Partners by Default in the Global Framework for Maritime Security*
Mr. Peter Hinchliffe, Marine Director International Chamber of Shipping

1415 - 1500 *Interests, Partnerships and Challenges within the Commercial Shipping Industry: A Maersk Perspective*
CAPT (Ret) Gordon Van Hook, Senior Director, Innovation and Concept Development, Maersk Line Ltd.

1530 - 1700 *Panel: Maritime Security Partnership* — Moderator: Dr. Charles Draper
Executive Director, National Maritime Foundation, New Delhi — CDRE Nalin Dewan
Office of Global Maritime Situational Awareness — Mr. Gary Seffel
Maritime Operations Centre Update — CAPT Steven Snyder

1830 - 2030 *Hosted Conference Dinner*

Wednesday, 01 April 2009 - Emerging Challenges and Coordinated Solutions

0830 - 0930 ***Day 2 Keynote Address:** Maritime Security Issues and Challenges in AFRICOM AOR*
VADM Robert Moeller, Deputy to the Commander for Military Operations AFRICOM

0930 - 1015 *The Implications of UNSCRs 1540 and 1810 for Maritime Security Authorities*
UN 1540 Committee Representative

1045 - 1130 *MAOC - Narcotics: Countering Illicit Drug Trafficking - Latest Developments*
Mr. Glen Pounder, UK Liaison Officer, MAOC-N

1130 - 1215 *Changi Command and Control Centre - Coordinated Response to Piracy and Armed Robbery at Sea*
LtCol Lock Pin Chew, Deputy Head Naval Ops for C4I, Republic of Singapore Navy

1330 - 1415 TBD RADM Steve Stead

1415 - 1430 TBD Selex - Finmeccanica

1500 - 1700 *Panel: Countering Piracy in the Gulf of Aden & West Indian Ocean* — Moderator: TBD
Current Regional Risks and Challenges — Mr. Roger Middleton
Policy View — CAPT Pottengal Mukundan
Operational View: The Canadian Perspective — RADM Paul Maddison
Multinational Counter Piracy Efforts — Ms. Kim Hall

Thursday, 02 April 2009 - Regional Challenges and Regional Progress

0830 - 0930 **Day 3 Keynote Address:** The USN's Emerging Approach to Maritime Security
ADM Mark Fitzgerald, USN, Commander US Naval Forces Europe and Africa

0930 - 1015 African Union: Status of Regional Maritime Security
CDR Samuel Kame-Domguia, Strategic Planning Officer AU Peace and Security Department

1045 - 1130 Integrated Coast Guard Network Initiative for West and Central Africa
Secretary General Magnus Addico, Maritime Organization of West and Central Africa

1130 - 1215 Maritime Security Issues in Middle East: Challenges in Joining the Global Maritime Security Partnership
Brigadier (SEA) Said Al-Sowaidi, Former Chief of Navy Qatari Emiri Naval Forces

1215 - 1300 Wrap-up Observations - Farewell
CDRE Bob Mansergh, DDIR CJOS COE, VADM Mel Williams, DIR CJOS COE

Visit www.cjoscoemaritimeconference.org to register.
For more information phone 919-954-1633

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