

ON SCENE

The Journal of U. S. Coast Guard Search and Rescue



This Issue: Command Centers

Fall 2005

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ON SCENE

The Journal of U.S. Coast Guard Search and Rescue
Winter 2005

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Notice to librarians:
The last issue published was the Summer 2004 edition.

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Front Cover: NEW ORLEANS (Aug. 30, 2005) - Coast Guard Petty Officer 2nd Class Scott D. Rady, of Tampa, Fla., gives the signal to hoist a pregnant woman from her apartment in the wake of Hurricane Katrina. U.S. Coast Guard photograph by Petty Officer 2nd Class NyxoLyno Cangemi

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A Note from the Chief of Search and Rescue...

Captain Steve Sawyer, USCG
Chief, Office of Search and Rescue



Here's to You, Joe Dimaggio...

Greetings shipmates!

Retirement comes around for a lot of us, and mine will come along in the Spring of 2006 after 28 years of active service, so please indulge me for a moment while I use this forum to address a few things before I head out the door.

First of all...we are all part of a wondrous thing. The maritime SAR system in the United States of America is unparalleled in the world. I know, as the Coast Guard has given me the opportunity to represent the SAR program at the IMO, at international conferences and elsewhere, and ours is the best...complete with dedicated SRU's, SAR controllers, communication systems, a training infrastructure, an effective and efficient unit siting plan, a "team" of commercial, local, state, federal and volunteer partners (on both the prevention and response side) -- and, as evidenced by our collective response to Hurricane's Kartrina and Rita, some of the best trained (and heroic!) crews that money can buy. Thank you all for allowing me to represent you and our SAR program over the last several years. It's been a distinct honor and pleasure, and I can think of no better exit than to depart the Coast Guard as it's incumbent Chief of Search and Rescue.

Secondly, having said all that, we cannot allow ourselves to rest on our laurels and to let our collective guard down...not even for a moment. The challenges that await us in the future aren't necessarily our response to the next hurricane or nor'easter, but are the internal issues that come with the dynamics of change. We need to think about the conduct of SAR within the "Sectorization" model and mission creep that comes from MDA and PWCS -- and our use of command centers and SRUs that were zero-based for SAR/legacy mission operations. It's not going to be an easy task to maintain our pre-eminence in SAR while concurrently taking on a bigger load and more responsibility -- and the answer has to be something besides putting more tasking on the backs of our people.

In the last two years, my Office has been able to successfully justify and acquire over 120 more watchstander billets for our command centers, 11 more trainers

continued on following page

for SAR School, complete the revamp of the Command Center Standardization Team from a SAR-only focus to a multi-mission focus, and acquire and expend funds toward completion of a multi-mission Command Center Program Manual (with related QRCs for all mission sets) and the completion of a training analysis of our Sector, District and Area Command Centers. That's a good start to get to where we need to go -- but it's just the beginning. More is needed. To better prepare ourselves for the future performance required of us, it is my opinion that even more watchstanders will be required to sustain the multi-mission command center watch and to monitor the myriad systems that will be in place -- and they will require protocols and QRCs, training at a dedicated command center course, and visits by a Standardization Team that checks on their readiness to conduct all of the Coast Guard's 11 mission sets.

A lot of this is already in motion to happen...accomplishment of the others will require prioritizing existing Resource Proposals (in an already resource-strapped and competitive environment). If I've learned anything throughout my career, it's that everyone already has a full and overflowing plate, and that oftentimes you get to a point where you can't add more without something else falling off...whether it's mission competence, use of leave entitlements, quality of life issues or personal health. What I hope doesn't happen is that positive change is precipitated by failure -- by our system hitting a breaking point, ala "Morning Dew;" where information overload leads to the maritime equivalent to 9/11. If anything, I know that leadership and our dedicated shipmates have already carried us through countless hairy episodes, where failure was a possibility but never an option. God bless all of you for everything you've done and will continue to do!

In closing, I'd like to bid farewell to all of you and to our Service by paraphrasing a quote from baseball legend Joe Dimaggio, who, upon his retirement from the game said, "baseball owes me nothing...I owe baseball everything." Thank you Coast Guard...I owe you everything!

Captain Steve Sawyer, USCG
Chief, Office of Search and Rescue



From the Acting Director of Operations Policy

CAPT James Hass

Our Coast Guard response to Hurricanes Katrina and Rita:

Within hours of Hurricane Katrina's passing, the Coast Guard surged 30 cutters, 38 helicopters and over 5,000 personnel into the affected areas, saving 26,055 lives in the first five days alone.

As I write this, Congress is holding hearings to examine the Federal response to these disasters. One of the most basic questions Congress asked was, "Why is the Coast Guard so good as the Nation's First Responder?"

Admiral Collins answered in his testimony before Congress, saying "Since 1790, the Coast Guard has been America's maritime "First Responder"...seagoing police, fire fighters, rescuers, environmental responders, and coastal defenders. The Coast Guard is on duty 24/7. As a response organization, with a robust command and control infrastructure, the Coast Guard is able to respond quickly to new information, operations and contingencies. Our focus on readiness, combined with a long-standing contingency planning and exercise program, prepares Coast Guard men and women for a variety of contingencies and operations."

Or, as the deck plate Coastie would say.... we've been doing this a long time, and we're darn good at it!

When the SAR Alarm went off in the Gulf Coast, every member of the team - Active Duty, Reserve, Auxiliary, and Civilian - selflessly gave their all in a tremendously successful effort. You have earned the respect and gratitude of the entire nation.

In my four months as Acting Director, I have had the privilege of providing policy guidance to the most dedicated group of search and rescue professionals in the world. Please accept my personal Bravo Zulu to all the "SAR Dogs" of Team Coast Guard.

Semper Paratus!

CAPT James Hass
Acting Director of Operations Policy

Operations and Marine Safety Merger: Command Centers Change to Meet the Need

By Commander Brad Clark

Coast Guard command centers are faced with providing a new level of service for a new organization. The merger of our traditional Operations and Marine Safety response communities into a single command provides unity of purpose and a single point of contact at our port level commands. Our organizational “vertical alignment” process to support this fundamental change has impacted every command at every level. At the very heart of this change are our command centers.

Command Centers which, for the most part, were staffed and budgeted to support our mission are no longer adequate to support this new organization. Our command centers have transitioned from a Search and Rescue (SAR)-centric focus to a multi-mission focus, from a response-based posture to a proactive posture, and from a single organizational support concept to a multi-agency concept. Establishing the framework to support these cultural changes is critical to our ability to establish new business processes. It requires not only a cultural shift, but a new way of thinking.

Newly emerging operational requirements associated with our traditional marine safety missions, the newly defined ports waterways and coastal security mission, enhanced collaboration, and support for anti-terrorism force protection represent new demands on our command center organization and capability. Accurately defining our new operational requirements and developing systems based solutions to support those requirements are the keys to defining our command center capability.

Coping with the Changing Need

The suddenness of our changing mission needs and the aggressive implementation of our organizational

change has left command centers, and their field commands, with a difficult set of circumstances. To date, only two specific (post-9/11) initiatives have started to add resources for specific components of the command center organization.

Immediately following 9/11, a 2004 resource proposal was initiated to help cope with increased work loads in the command centers. That resource proposal was successful in providing an initial cadre of Maritime Domain Awareness (MDA) watchstanders to the Area command centers. However, follow-on resources never materialized and District and Sector command centers still feel the frustrations associated with a staffing to workload imbalance.

In 2005, the Joint Harbor/Maritime Operations Centers (JHOC/JMOC) concept was approved and received additional resources to stand-up the joint operations centers in Hampton Roads, San Diego, and Seattle (Charleston was supported through a DOJ initiative). These initiatives provided needed resources, especially in the form of additional watchstanding billets, to those locations. However, these resources addressed only pockets of our command center organization and have not addressed system-wide challenges.

Elsewhere, our field commands must be commended for their diligent and often creative solutions for coping with these new challenges. Commands at all levels have been forced to cope with increased command center workloads and the need for new capabilities to support emerging operational requirements. Although commendable, these efforts come with risks.

Many commands have reacted by sacrificing staffing at other positions within the command center. Oth-

ers have re-programmed billets within the command to stand command center watches. At the same time commands continue to search for new capabilities and processes that support these new operational requirements. While commendable, these efforts remain only short term solutions. We must keep in mind that long term acceptance of ad-hoc solutions to staffing and capabilities work against our ability to develop a systematic method for addressing command center support, training and a structured career development for our personnel.

Command Center Culture Transition Initiatives

At Headquarters, the Command Center Program has initiated several work efforts to help transition our legacy command center culture to one that meets our current organization needs. These initiatives include:

- Command Center CONOPS/Staffing Standards
- Command Center Training System
- Command Center Program Manual
- Command Center Stan Team Transition

These initiatives are aimed at providing a framework for the dynamic and emerging command center culture of tomorrow. The following provides an update on the status of each of these initiatives.

CONOPS/Staffing Standards

The Command 2010 Staffing Standards is presently in the Chief of Staff's office and the draft Concept of Operations (CONOPS) for Sector Command Centers has recently completed initial concurrent review. Subsequent to their preparation, it became apparent that actions in system acquisitions and vertical alignment have increased the required scope of these documents.

As such, the Office of Search and Rescue (G-OPR) is revising both the CONOPS and the Staffing Standards documents to include all Command Centers (Area/District/Sector) and the Command Center CONOPS document will be aligned with the Publica-

tion 3 series, especially Publication 3.3. The scope of both documents will now also incorporate all known aspects of Deepwater systems at Command Centers, Rescue 21, and the proposed capabilities of Command 2010. The planned completion date for the revised drafts of these documents is now late 2005.

Training System

The initial Sector Command Center task analysis has been completed. A combined presentation by G-OPR, CG-13, and our contractor, was made to the annual Human Performance and Training conference in Yorktown in September. A work group of sector command center watch standers was convened to validate these tasks. A follow-on work contract has been awarded through CG-1 to conduct a cost-benefit analysis on appropriate training interventions. The completion date for the training analysis contract is April 2006.

As a by-product of sector implementation and vertical realignment initiatives, Command Centers are increasingly responsible for basic knowledge in all eleven Coast Guard mission areas. As a result of continued implementation of performance improvement interventions, personnel assigned to Command Center billets, despite a steep learning curve, will have an exceptionally broad-based knowledge of all Coast Guard missions. G-OPR will continue to work with CGPC-OPM and workforce managers to establish/refine career paths for OS, officers, and civilians in Command Centers.

Command Center Program Manual

The manual is currently under development by G-OPR staff and our contractor (Bearing Point). Development of standardized quick response cards (QRC) for all mission areas will be included as an annex to the manual. The completion date is summer 2006.

Command Center Standardization Team (CCST)

A revised checklist has been developed which incor-

porates both inspection items and survey items in all mission areas. The purpose of the survey items is to gather information on tasks and best-practices during the standardization visits. Team visits to command centers will re-commence in November 2005. The initial visits through early 2006 will be information visits to the Districts, where the CCST will meet with District and Sector Command center supervisors to review the checklist and to discuss the way ahead. A working group consisting of representatives from HQ program managers from the different mission areas is being consulted during the development of both the revised checklist and the Command Center Program Manual.

Developing Command Center Capability

Although command centers have supported search and rescue and law enforcement operations for many years, the “operational requirements” for command centers has never been thoroughly examined. Today our organizational structure requires command centers to be, in tactical terms, the eyes, ears, and voice of our field commanders in supporting our eleven mission areas. A detailed examination of system requirements, and a methodical development of operational requirements, is absolutely critical in order to define our command center capability.

To adapt our command centers to meet our new performance requirements, we have to adapt our thinking on command center capability. We begin this change by viewing and managing our command centers as a “*complex system.*” The most basic pieces of this system are defined by Capacities and Functions. Our capacities are those elements of the command center, that when combined, provide us with the capacity to do something. The functions of the command center outline how we use those capacities to support mission objectives.

For the purpose of our command center model our *capacities* are identified as:

- Agents (includes staffing, training, professional development of individuals and teams as well as the application of artificial intelligence to watch

processes)

- Infrastructure (includes all hardware internal and external to the CC, basic software applications, and the CC facility)
- Doctrine (includes policy manuals, and Tactics Techniques, and Procedures (TTP) -related materials)

The *functions* of the command center are defined as:

- Information Management
- Situational Awareness
- Command and Control

If we represent these capacities and functions as a relationship, this then describes the “*complex system*” the Command Center represents. Figure 1 represents the fact that a combination of system capacities is required at each level to support each of the three functional areas. The system requirements for each of the Coast Guard’s eleven core mission areas are then applied to this pyramid to establish our operational requirements.

Currently, there are numerous new initiatives underway aimed at adding some additional capacity to our



Figure 1. Complex System Pyramid

command center system. Figure 2 portrays how some of the more prominent projects will impact Command Center capacities.

While each of these prominent projects is individually designed to replace or improve existing capability, the command center program remains concerned on two primary points. First, we need to ensure proper integration of the capacities being brought on by each on the projects. For example, the new case management tool brought to the upper level command centers by the Deepwater Project must somehow be integrated with that used at the sector level. Secondly, we need to ensure the combined impact of these projects is supported by the proper combination of capacities. For example, each project brings new equipment, yet most of the existing watch facilities simply do not have the space to accommodate the additional equipment, much less support surge operations and participation by port and agency partners. Much of the new capacities are aimed at improving information management and situation awareness within the command center, but require an increase in amount of trained staff to leverage these new systems. Currently Command 2010 is the only project

that considers staffing as part of the systems solution. Only through a balanced blend of capacity elements (agents, infrastructure, and doctrine) can command centers fully realize a new level of capability.

Conclusion

We find ourselves in a period of significant change. The command center program will work ardently with other program offices and directorates to address these needs. Changing the longstanding culture of how our organization perceives and utilizes its command centers, accurately defines operational requirements, and pursues new systems based capabilities, is the key to developing command centers that can properly support our new organization.

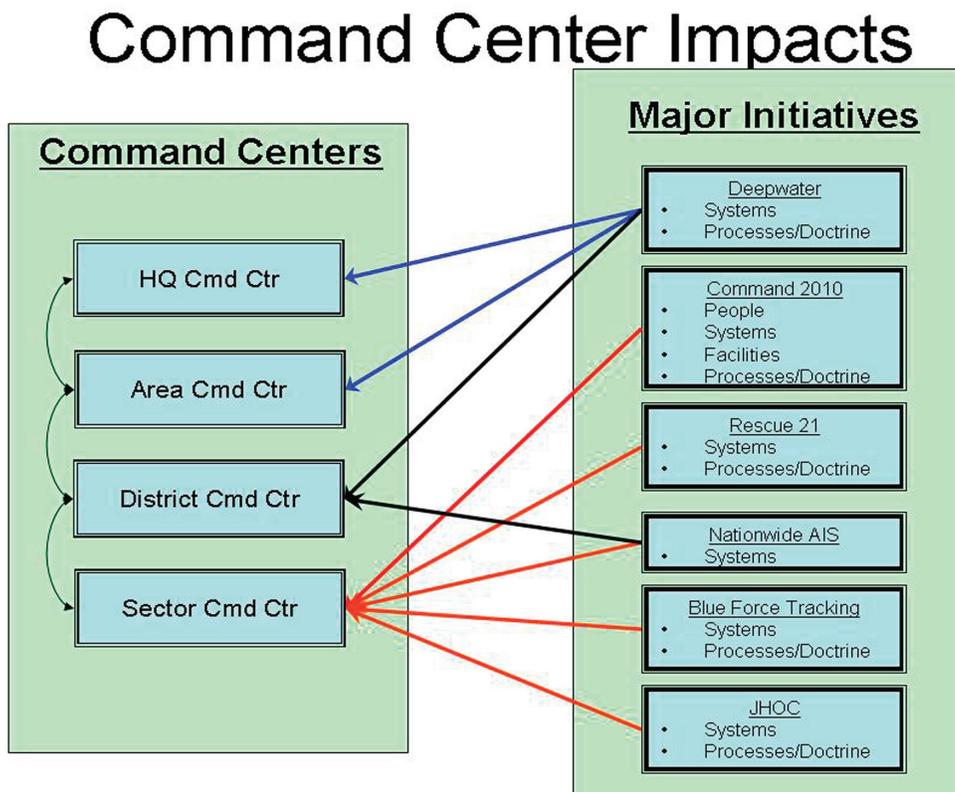


Figure 2. Prominent Projects

- Update

By Kathryn Manzi

Over the past year the Rescue 21 national distress notification/short-range communications project has been steadily maturing. In August of 2004, formal training on the system for Operations Specialists (OS) commenced for Sector Field Office's (SFO) Atlantic City and Eastern Shore, as well as, the start and completion of the System Integration Testing (SIT). As expected, this testing highlighted some system refinements required to render the system ready for Operational Testing and Evaluation (OT&E) in February, 2005.

At the completion of OT&E additional issues were identified that prevented project management from pressing on with Rescue 21 system deployment. Many were related to the Human System Interface (HSI) of computer pull down menus and computer screen layouts. Such needed improvements were brainstormed by the watch standers and prioritized for action. The General Dynamics C4 Systems (GDC4S) software development team incorporated the changes and has installed HSI version 1.0 with a marked increase in "user friendliness."

On August 20th, 2005, GDC4S brought the R21 national distress notification/short-range communications system on-line. The OS's worked on the Rescue 21 communications system with GDC4S training personnel on-site to guide them through daily operations through October 30th. Additionally, the Office of Search and Rescue, SFO's Atlantic City & Eastern Shore, Coast Guard Training Center Yorktown, LANTAREA (Acc), and the Office of Command and Control have developed Operational Policy for the effective use of the R21 system and as the system network grows, the policy will adapt as necessary. With the Human System Interface refined and system reliability proven after 30 days of strong performance, permission was granted on 21 November 2005 to declare Initial Operational Capability (IOC) at both Atlantic City and

Eastern Shore. An official Commandant ceremony recognizing this major project milestone is scheduled for December 20, 2005.

With these two systems accepted, , the Low-Rate Initial Production (LRIP) regions, Sector Command Center's (SCC's) Seattle, Port Angeles, Mobile and St. Petersburg will begin the process of replacing the legacy equipment within the Command Centers with the Rescue 21 suite. The majority of the infrastructure in these regions (i.e. Remote Fixed Facilities (High-level sites) and shelters) has already been installed. When the LRIP regions are completed, full deployment will commence throughout the Coast Guard. The deployment of the R21 system will mimic the deployment in the IOC regions to include testing, system training, cutover ceremonies, etc. Installation of the coastal continental U.S. is scheduled for 2009; inland waters, the Great Lakes and OCONUS sectors will follow in 2010 and 2011.

The Rescue 21 Project team has worked long hours to assure that the Coast Guard SCC's receive a short-range communications system that will enhance Search and Rescue capabilities as well as the many other missions the Coast Guard performs.

If you have any questions regarding the R21 system deployment please contact Mrs. Kathryn Manzi at 202-267-0810.

Kathryn Manzi is a program analyst in the Policy Division, Office of Search and Rescue, USCG Headquarters and SAR Program project specialist for RESCUE 21. o/s



Command 2010

Transforming Coast Guard Command and Control Capabilities

By Mr. Dana Goward & CDR Cary Porter

First the engine goes out; then the power goes out. A disabled and adrift fishing vessel flounders at sea. The crew is terrified of the mountainous waves and the buffeting winds. They are helpless and scared because they don't know if their Mayday call went out before the power died...

But someone was listening. At the local Coast Guard Station a petty officer on watch heard their cry for help and dispatched a helicopter to assist. This scenario plays out every day of the year with the Coast Guard responding to 109 search and rescue (SAR) cases per day. The US Life Saving and Revenue Cutter Services were planning Search and Rescue operations long before the advent of the helicopter. These two services were combined into the Coast Guard in 1915. Since the Coast Guard's birth, the tools used to find lost sailors and fisherman in distress have changed significantly.

The tools have changed and evolved to serve an exploding boating population. Gone are the flag hoists, watch towers and beach observation posts. Now the Coast Guard has incorporated the latest, state of market technology to take the Search out of Search and Rescue. Systems used to support SAR include radar, the Nationwide Automatic Identification System (AIS), Search and Rescue Satellite (SARSAT), and Command and Control Computer systems – all integrated with geographic display systems to provide decision makers with the tools necessary to save the lost sailor, airmen or fisherman. And we aren't done yet.

The Coast Guard is poised to take another quantum

leap forward in our command and control capabilities – the Command 2010 Project. Command 2010 will help Sector, District and Area Commanders have a dramatic increase in their awareness of their Maritime Domain by providing:

- An integrated port and coastal maritime command and control system (currently separate)
- Tactical Sensor data
- Support to all Federal, State, and Local Operations

The Command 2010 project will add sensor and data fusion capabilities currently not available in the pre-9/11 Coast Guard. This will transform Coast Guard command and control from a reactive posture focused primarily on SAR and law enforcement missions, to a proactive posture supporting all maritime security and safety operations. Equally important this will ensure the service's Command & Control (C2) system is vertically aligned between all echelons of the chain of command - Sectors, Districts, Areas & HQ – and horizontally with Department of Homeland Security (DHS) regions, DOD/DOJ agencies and port partners.

Command 2010 will focus on enhancing tactical capabilities for the Sector Commander. The Sector Command Centers will become the nerve center for coordinating all Coast Guard operations within the port. Due to the number of command centers being considered for upgrade (35), this project will have the greatest resource needs for increasing staffing and upgrading equipment, sensor and connectivity (note: HQs, Area & District Command Centers (CCs) currently being upgraded).

The wholesale upgrade of C2 capabilities, which is

being implemented as closely as possible with the stand up of Coast Guard Sectors, will address a number of Leadership, Facility and Equipment Issues.

Leadership/Organization:

The Coast Guard is currently organized into separate, functional entities. CG groups prosecute SAR, law enforcement and homeland security missions while marine safety offices handle all captain of the port safety operations. The advent of CG sectors changes all this by combining group, marine safety and, in some cases Vessel Traffic Service (VTS) operations under the sector command organization. Sector Commanders now have legal authority and responsibility for all missions with their port. Having one local CG authority in each major port is a major shift in operations and allows for clearer lines of authority within the Coast Guard. In a parallel effort, the Department of Homeland Security is establishing a regional structure which will roughly mirror the sector construct.

People:

We can have the finest sensors, communications gear, helicopters and boats in the world but it won't make any difference if we don't have the right number of highly trained personnel as central decision makers. It is clear that transforming the Sector's command and control capability will take a host of training, operations and technical support personnel.

Command center watches will be transformed from the traditional one person radio position supporting a single operations controller, to a larger, integrated, flexible, and expandable team. And it will be a team that focuses as much on maintaining awareness and anticipating situational changes, as it does planning and executing response operations.

Aligned with Incident Command System (ICS) organization and principles, these watches will be staffed with a combination of members of the new Operations Specialist rating and specifically selected and trained government civilian employees.

Training:

Even though procedures, best practices, and even equipment sets, are still being finalized for Command 2010-transformed command centers, much can and is being done to simultaneously develop training programs that will meet immediate needs, while also helping to establish benchmarks for future system development. The USCG Research and Development Center is developing procedures at the Sector Miami Hawkeye command and control test bed; the Commandant's Office of Training and Performance Consulting is transforming this into course material, and Deepwater is looking to develop a Coast Guard Command Center schoolhouse, undoubtedly to include our current world-class ICS and SAR programs.

Facilities:

"Brick and mortar" issues will be a constant challenge as we seek to house the equipment and personnel that will be the nation's maritime nerve centers. Not only must we accommodate USCG needs, but as the most visible, and frequently only, 7x24 maritime safety and security presence, we must be able to accommodate watchstanders from other DHS and port partner agencies. All of this is needed plus space to accommodate the needs for on-site executive leadership and press briefings.

Equipment:

The Hawkeye Project testbed at Sector Miami, sponsored by the Department of Homeland Security's Office of Science and Technology, has allowed us to develop a core command and control platform that will integrate all our sensors, communications, and data. This "Hawkeye Core C2" will also allow users to import the national maritime Common Operational Picture (COP), export local information to be included in the national COP, and has a web client that will allow sharing unclassified portions of the COP with port partners. The overall Hawkeye testbed has also greatly improved our understanding and appreciation of the performance and use of different sensors, and is continuing to add to our knowledge base through

a spiral development process. It has allowed the development of a standard equipment menu from which the appropriate mix and amount of gear can be selected for any given need or area.

Project Plan:

Command 2010 is a multi-year effort that will focus first and foremost on the needs in the port and coastal region. Implementation of increased capability in any given location may well be phased as the resources and opportunities to implement equipment, staffing and facilities upgrades may well become available at different times. Five USCG sector and group/COTP offices have already received significant improvements in their ability to see and understand what is going on in their ports, and additional installs are expected each year until all are complete.

Integration with Deepwater systems, the new Rescue 21 communications system, and operability with the communications and information systems used by port partners and other agencies will also be an essential task.

While there is no shortage of challenges for the Command 2010 team, the absolute necessity of this transformation, along with the strong support of the service's senior leadership, will ensure its ultimate success.

The Coast Guard, during an average day, will:

- Conduct 90 Search and Rescue Cases
- Save 15 lives Assist 117 people in distress
- Protect \$2,791,841 in property
- Launch 396 small boat missions
- Launch 164 aircraft missions, logging 324 hours
- Board 122 vessels
- Seize 169 pounds of marijuana and 306 pounds of cocaine worth \$21,000,000
- Intercept 30 illegal migrants
- Board 100 large vessels for port safety checks
- Respond to 11 oil or hazardous chemical spills totaling 2,800 gallons
- Service 135 aids to navigation

Maritime Domain Awareness In Action: District 17 Command Center

By LTJG Nathan Menefee

You may be aware how vast Alaska is, but you may not realize the incredible amount of maritime shipping traffic that transits the Seventeenth District's area of responsibility every day. One of the busiest shipping lanes in the world, the Northern Great Circle Route, cuts through the Seventeenth District within a narrow stretch of water along the Aleutian chain. High concentrations of foreign and domestic shipping traffic pose unique challenges in both prosecuting search and rescue (SAR) and maintaining homeland security.

Since September 11th, the Coast Guard has increased the safeguards in the U.S. maritime domain and its associated ports and waterways from not only a terrorist attack, but from a multitude of vulnerabilities that include illegal drug trafficking, migrant smuggling, and threats against U.S. economic resources. Successfully guarding the U.S. maritime domain requires an awareness of the activities occurring within it. The Commandant of the Coast Guard has defined this state of Maritime Domain Awareness (MDA) as "the effective knowledge of all activities associated with the global maritime environment that could impact the security, safety, economy, or environment of the United States."

To establish an effective MDA within this vast area, District 17 created a new "MDA watch" position within the command center. This dedicated watch desk is one of the

first of its kind within a Coast Guard and has been in operation for approximately a year. District 17's MDA watch is currently staffed by 5 watch officers who use a variety of tools and resources to detect, track, and target the varied maritime activities occurring in the District at any given time. Threats, anomalies or suspicious activity, and significant events are briefed to the appropriate Coast Guard units along the Pacific coast as tactical intelligence. The MDA watch provides a single point resource for local, relevant and real-time intelligence, right in the Command Center.

One of the vital tools for the MDA watch is the Common Operational Picture or COP. The COP serves as a graphical plot of all "friendly," "enemy/suspect," and "neutral" vessels, referred to as "tracks." The source information for the COP comes from a variety of resources both classified and unclassified. The District's MDA watch inputs locally obtained information into both systems to assist in monitoring and



LT Claire monitors the District 17 shipping picture from the Command Center

sharing local domain awareness. Of particular note is the addition of local Automated Identification System (AIS) data into the COP which has greatly increased the District's awareness on internal and territorial waterways. AIS enables the MDA watch to view real-time vessel traffic within Alaska's major ports.

Each day the MDA watch monitors every foreign vessel that makes an arrival into the District's ports and anchorages. This gives the District Commander complete visibility on each foreign vessel coming into their area up to 96 hours out. Significant events such as military cargo shipments, Naval submarine testing operations, missile launches from the Missile Defense Agency's Kodiak Launch Facility, and the arrival of the Navy's Sea Based X-Band radar (SBX) are also monitored very closely from the MDA desk.

Coast Guard Headquarters' Maritime Domain Awareness Program Integration Office is leading the Coast Guard's MDA initiative. They have published a Concept of Operations (CONOPS) that outlines how the Coast Guard will develop and use various systems in its progress towards achieving MDA. District 17 has used this CONOPS to develop the MDA watch within the command center. There are still many challenges ahead, however, with continued innovation, expert use of technology, and cooperation between various partners, MDA will continue to be a tool that will help us maintain homeland security, and protect our waters and resources in the Seventeenth District and throughout our nation.



MDA watchstander works with SAR controllers in the District 17 Command Center



The Coast Guard Cutter MUSTANG (WPB 1310), as one of only three patrol boats in the Central Gulf of Alaska, MUSTANG conducts SAR, LE, & MDA operations from Yakutat to Shumagin Islands and Unimak Pass; including Prince Williams Sound, Kodiak Island and Cook Inlet.

Critical Incident Communications

By: CAPT Brian Kelley & CDR Mark Rizzo

Since the terrorist attacks on September 11, 2001, we have experienced first hand the reshaping of our organization coupled with tremendous growth in terms of assets and capabilities. In these authors' combined 49 years of service, we have never seen our people more prepared to conduct a wide array of Maritime Homeland Security Missions in addition to our traditional portfolio of missions. The enthusiasm and professionalism we have seen daily in our young petty officers stepping into harm's way to serve as members of Boarding Teams, Tactical Law Enforcement Teams and Maritime Safety and Security Teams onboard our cutters, small boats and at our shore units has been astounding. They are the primary and most capable protectors of our ports and our homeland.

As we have seen in the past and most recently in Europe, terrorists can strike any vulnerability without regard for the lives of others or their own lives. Our challenge is to reduce any vulnerability that terrorists can exploit while preserving the liberties of our free and open society. It is our responsibility to make every effort to minimize terrorist opportunities and prevent them from occurring. In the event an attack does occur, we must be prepared with planned responses to mitigate damage and loss of life.

Why Critical Incident Communications?

In a Government Accountability Office report published following September 11, 2001, one critical observation was that government agencies had not established standard protocols for timely sharing of critical information. As a result, Homeland Security Presidential Directive Five (HSPD-5) mandated a consistent nationwide approach for federal, state and local governments to work effectively and efficiently together.

The Secretary of the Department of Homeland Security and our Commandant have a need for situational awareness because they are personally responsible

for ensuring we identify and respond to any incident of national significance. The speed at which many national security incidents and operational events unfold requires nearly instant notification of high-level civilian and/or military leadership to initiate emergency procedures and implement courses of action.

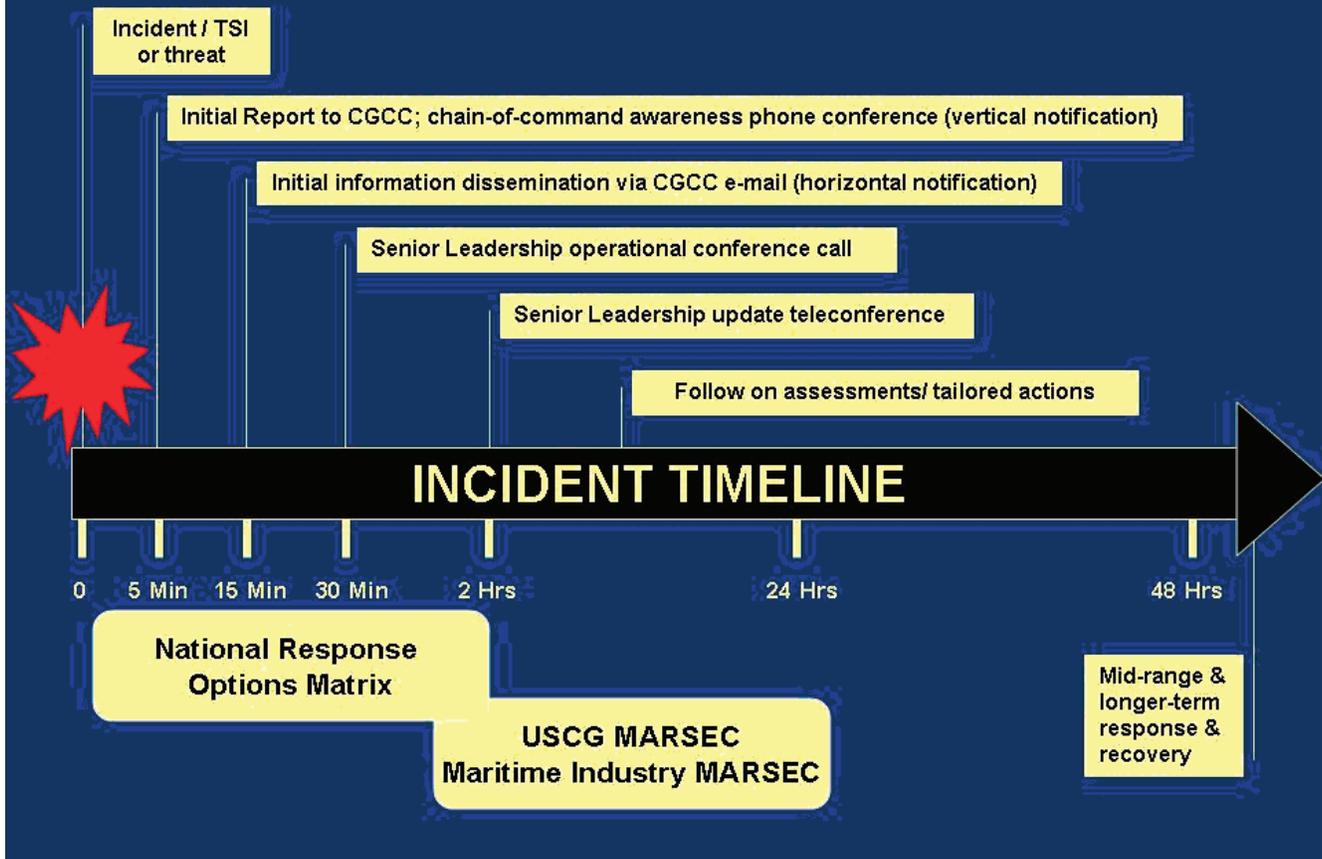
A critical incident is an incident of national interest where it is conceivable that the Commandant or the Secretary of the Department of Homeland Security requires timely knowledge of the incident. (See COMDTINST 3100.8A for examples of Critical Incidents.)

A Need for Speed

Our requirement in the post-9/11 era is rapid, concurrent, vertical and horizontal awareness. Recent events, such as the Madrid and London bombings, 9/11, the Anthrax letters, Al Qaeda attacks in Africa, and Iraq VBIEDs (vehicle borne improvised explosive devices) demonstrate our enemies' modus operandi: coordinated, near-simultaneous attacks in varying locales. We can no longer afford the excessive time it takes for sequential, command-to-command notifications of nationally significant events. Once the first attack occurs, our stopwatch to prevent a subsequent attack starts. We have a clear and present need for speed so that we can turn awareness into widespread action. The overarching goal must be rapid awareness first, knowledge and detailed information later.

We learned that our current processes for reporting critical incidents, such as OPREP-3 messaging or traditional, sequential chain-of-command notifications, do not meet our criteria for generating rapid awareness of nationally significant events. To meet the requirements of HSPD-5 and ensure the Secretary's and Commandant's expectations are met, we developed and implemented the Critical Incident Communications Protocol promulgated in COMDTINST

USCG Critical Incident Communications Protocol



3100.8A, and amplified in ALCOASTs 006/05 and 048/05.

Reporting Critical Incidents

This process introduced a streamlined notification system to rapidly report initial, limited information about critical incidents throughout the Coast Guard and to interagency partners. The timeline starts when anyone in the Coast Guard first becomes aware of a possible or known event. We established use of 1-800-DAD-SAFE (323-7233) to promote speedy reporting directly to the Coast Guard Command Center. Within five minutes, all command centers in the vertical chain of command are linked for concurrent notification. This allows us to quickly collaborate, align our information flow, and provide a consistent message to our stakeholders. Within fifteen minutes, the Coast Guard Command Center sends an e-mail that includes what we think happened, a Coast Guard assessment, and an initial action plan horizontally to

command centers across our organization and externally to our partners, such as the Homeland Security Operations Center, the National Response Center, and the National Military Command Center.

The Skeptics

Understandably, the Critical Incident Communications protocol has its skeptics. Many contend that our first responders should be concerned with “fighting the fire” rather than reporting a critical incident. Often our first detector is our first responder – they should “fight the fire” first and pass information as soon as possible. However, the first notification is critical to start the protocol. Remember, the first call goes to (800) DAD-SAFE.

A second concern we’ve encountered centers around the time-old beliefs that “I have to notify my supervisor/command first” or “I need all the information so I can answer all the questions” or “I’ll be criticized

for making a report that doesn't pan out." We must change these cultural biases. These notions no longer apply to nationally significant events. They slow the flow of information and diminish rapid awareness. At no time in our history has the need for rapidly flowing information been so important. Technology enables us to build awareness throughout our organization, but we must overcome old habits.

Lastly, the greatest fear is that the Critical Incident Communications protocol will lead to Coast Guard Headquarters managing field operations. This simply has not happened in the eight months since we started using this protocol to report nationally significant events. Remember, this process manages the information flow, not the mission.

To Report or Not to Report ...

The examples and definitions of possible events that would require a Critical Incident report as described in COMDINST 3100.8A are purposefully vague to encourage reporting of actual or suspected incidents. A general guideline is that if you think a known or suspected event may be a critical incident, then call (800) DAD-SAFE. You won't make a mistake reporting an incident, but you can make a mistake by electing to not report an incident.

As the Vice Commandant notes in ALOAST 048/05, the most important and timely link in reporting a critical incident is the local unit. Our first responders have the basic information that will build awareness that a critical event has occurred. We acknowledge that initial information is often scant, and first reports sometimes prove inaccurate. No one should hesitate from making a critical incident notification while awaiting details. The mere suspicion that a critical incident may have occurred or is developing is enough justification to start the notification protocol. There will be no backlash for making a notification that pans out to be a non-event.

Sometimes we receive reports that, after inter-command center collaboration, are deemed to not fit the Critical Incident criteria. This information is nonetheless important, and the Coast Guard Command Center often sends an information alert vertically

and horizontally across our organization via e-mail to build awareness.

Measuring Our Effectiveness

Overall, we are very pleased with the efforts of all operational units, Districts and Areas in their efforts to report critical incidents in a timely manner. We recognize that it is a new paradigm for all of us. We are improving, as evidenced in daily operations and in the quarterly no-notice Critical Incident Communications protocol exercises.

We have been keeping statistics on Critical Incident calls since April 2005, and there are some areas where we need to improve. We have been doing very well on meeting the T+5minute requirements as on average the T+5minute conference call starts only 4 minutes after initial notification to the Coast Guard Command Center. In the Coast Guard Command Center, we need to improve our time getting out initial email notification to senior staff, which on average goes out 11 minutes later than it should. The T+30minute conference call is typically starting at 40 minutes. We expect these numbers to continue to go down as we continue to refine this process.

Finally, we applaud the efforts of the field in making this process work, and we look forward to communicating with the operational units, Districts, and Areas in the future to make this process as efficient and responsive as possible for the Commandant and the Secretary. We are overcoming over 215 years of cultural biases to build critical awareness rapidly, concurrently, to the highest levels of government, and across our widespread organization – and you're making it happen.



Around the World with:

By Benjamin Strong

International Rescue Coordination Centers and Amver

Amver, the worldwide search and rescue (SAR) system, is just that; worldwide. It is easy to forget the vast oceans that are not within the U.S. search and rescue region (SRR). Recently, a natural gas platform off the coast of Mumbai, India, caught fire and exploded killing 12 people while 367 people had to be rescued by a patchwork of commercial and Indian Coast Guard vessels. Would the outcome have been different if Amver had been used? It is difficult to say. SAR controllers around the world, however, should be reminded that Amver is another valuable tool that can be accessed during SAR operations. In another case, a fishing vessel with 113 persons onboard sank off the coast of Ecuador. Fortunately, Amver vessels were dispatched to rescue the survivors. Cases like this occur every day outside the boundaries of our SRR. Amver, however, is available worldwide, regardless of SRR or RCC requesting Amver information. On any day there are approximately 3,000 ships ready and available to divert and assist a mariner in distress. While most United States Coast Guard (USCG) controllers know the value of Amver, many international RCCs either do not know about Amver, or do not know how to request timely SAR information from Amver. In the past there may not have been a mechanism in place for an international RCC to both request an Amver surface picture (SURPIC) and provide feedback on requested SAR information. Personnel in the Japanese Coast Guard, who operate a system similar to Amver called JASREP, have developed a form they can forward to USCG RCCs to request Amver information.

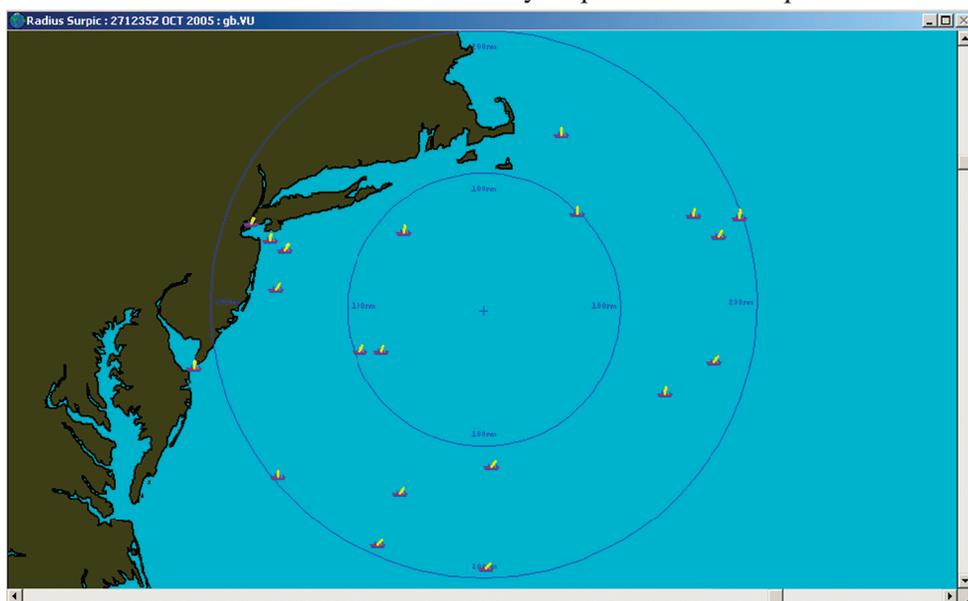
The Japanese Coast Guard has



long been a strong advocate of Amver. In cooperation with the Joint Rescue Coordination Center in Honolulu, the Japanese Coast Guard developed a very useful Amver SURPIC request form. The form includes pertinent information such as:

- Nature of distress
- Time and date of distress
- Position of distress
- Description of vessel
 - o Name
 - o Call sign
 - o Type
 - o Goss tonnage/length
 - o Number of persons on board

The request also specifies the type of SURPIC needed. In the case of the Japanese form, a radius SURPIC is usually requested. The request also de-



An Amver radius Surface Picture (SURPIC) showing vessels available to assist in the event of a maritime emergency.

tails how the ship will be contacted by the Japanese Coast Guard and how the requesting RCC would like to receive the SURPIC information.

Just as important as the SURPIC request is the need for follow up and feedback after a SAR case. The Japanese Coast Guard has also developed a report that describes the highlights of the case and what Amver assets were used. The report includes:

- Nature of distress
 - o Fire
 - o Flood
 - o Capsized
 - o Man overboard
 - o Other
- Time and date of distress
- Distress alerting from the ship by
 - o EPIRB
 - o Radio
 - o INMARSAT
 - o Other
- Position of distress
- Number of persons onboard

The Japanese Coast Guard also provides information on the Amver ship diverted including its name, call sign, and what type of service it provided. Finally, the report states the numbers of lives saved or assisted and estimates the value of the property saved in US dollars.

The best way for an international RCC to contact the USCG and request an Amver SURPIC is to call a USCG RCC. RCC emergency contact information is available at <http://www.uscg.mil/hq/g-o/g-opr/rcc's.htm> or by going to the Amver website, www.amver.com, and click on the link labeled United States Coast Guard Rescue Coordination Centers. 24-hour Emergency Contact Information is on the top right portion of each web page. It is important that SURPIC request information be directed to USCG RCCs and not the Amver office. The Amver office, in New York City, is not staffed 24 hours and does not have the ability to provide Amver SURPICs. In addition to the Japanese requesting Amver SURPIC information, India, Vietnam, and China have asked how to

obtain Amver information as well. As more and more Coast Guard agencies learn to use Amver we should be prepared to provide the necessary information for them to successfully execute SAR cases throughout the world. International RCCs should have plans in place to rapidly request Amver SURPIC information and have a mechanism to provide feedback once the case is closed.

USCG RCCs should remember that when requests for Amver information are received, the Amver Maritime Relations office in New York should be notified as well. Specifically, and in accordance with COMDTINST M16130.2D, whenever an Amver participating vessel makes a rescue or diverts to assist (with or without positive results), or a foreign RCC requests a SURPIC, operational summaries or situation reports should be sent to the Amver Maritime Relations office by email. These stories are then used to continue to recruit new vessels while rewarding those that have made dramatic rescues.

Amver is continually evolving. As the Amver Maritime Relations staff continues its marketing efforts, request for Amver related SAR information will likely increase. As participation in Amver increases there are bound to be more successful stories of amazing rescues across the globe.

New Faces At Amver

The Amver Maritime Relations Office, in New York City, is sporting a new face. Mr. Benjamin Strong has recently transferred from the USCG Headquarters Office of Search and Rescue. Ms. Beverly Howard remains on the AMR staff. Together, they are available to answer questions about Amver and provide briefings to interested RCCs or other USCG units.

The Amver Maritime Relations Office is located in the Battery Park Building in New York City.

They may be contacted at (212) 668-7762
See them on the web at www.amver.com

Hawkeye Technology and the Sensor Manager

By LT Justin Noggle and BMCS John Royal

Staff from the Coast Guard Research and Development Center (RDC) arrived in Miami in late 2001 to look for ways to increase maritime domain awareness (MDA) among the watchstanders in command centers. After months of studies, data collection and brainstorming sessions, RDC staff recommended that radars and cameras, strategically placed throughout the port, coupled with blue force tracking — technologies that tell U.S. military units where friendly forces are — would increase situational awareness for the watchstanders and local port partners. C2CEN was briefed and put a system together to meet the requirements recommended by the Coast Guard Research and Development Center. The system consisted of infrared cameras; long range optical cameras, RADAR, Geographic Information System/ AIS display, blue force tracking and a web portal for sharing information with port partners. The only thing that was missing was a name until the name HAWKEYE was selected to represent the technology that would lend improved MDA to Sector Miami.

The Command and Control Engineering Center (C2CEN) installed the prototype system in the Group Miami operations center in May of 2002. Since the initial installation of HAWKEYE, C2CEN has made numerous design spiral improvements and oversaw the hiring of contract technicians to maintain the system components. With the new equipment in place, dedicated watchstanders were needed to man the new HAWKEYE system. Captain James Maes, the Sector Commander, recruited 13 Coast Guard Auxiliarist while Coast Guard Headquarters brought five Coast Guard Reservists onto extended active duty to meet HAWKEYE staffing requirements. C2CEN trained the new operators or “Sensor Managers” (SM) on HAWKEYE operations. The Sensor Manager uses HAWKEYE to monitor the coastal approach, anchorage and the ports within the Sector. They check lookout lists, and the pilot’s arrival list, against what they see on HAWKEYE and report any discrepancies. Additionally the Sensor Manager is looking for and reports suspicious behavior or anomalies to the Situation Controller for evaluation. Below are a few

examples of when HAWKEYE technology has proven extremely valuable to the operations of the Sector Command Center and critical to the success of Coast Guard missions in South Florida.

In October 2004, the M/V FEDERAL PESCADORES with a cargo of 39,000 tons of cement ran aground while attempting to anchor just north of the entrance to Port Everglades. Using the archived AIS data in HAWKEYE the Command Center was able to retrace the path of the M/V FEDERAL

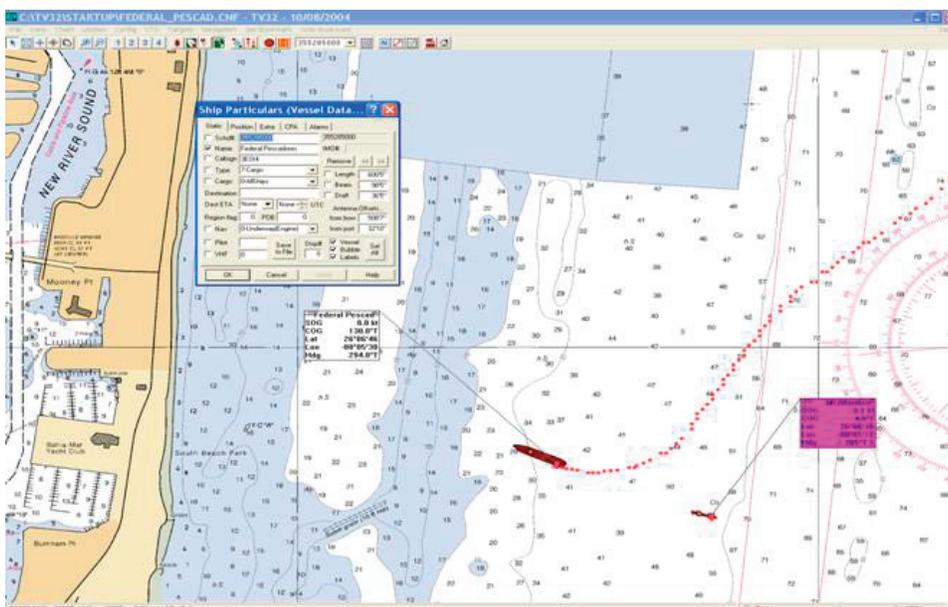


Figure 1: AIS track history from the M/V FEDERAL PESCADORES

PESCADORES through the grounding and subsequent re-floating. This information was crucial to the incident investigation and for assessing the damage to the fragile reef area near a local municipality. HAWKEYE cameras then monitored the lightering of 700 tons of fuel and salvage operations until the vessel was successfully re-floated.

In May 2005, the Sector Command Center received a report that a 65-foot yacht with four people on board was on fire at the entrance to the Port of Miami. The

leezza Rice, and her foreign minister counterparts from 34 countries in the Western Hemisphere attended the first OAS gathering in the United States in 70 years. HAWKEYE was used to track and coordinate over 25 blue force assets from local, state and federal agencies patrolling the waters in and around the security zones adjacent to the convention center. Infrared and long-range optical cameras gave the watchstanders at the Maritime Operations Center increased maritime domain awareness. One early morning during



Figure 2: OS3 Katherine Birch stands watch as a Sensor Manager at SCC Miami.

Sensor Manager quickly located the vessel with the Hawkeye cameras and monitored the situation, passing real time information to assets that were responding. The Sector Command Center was able to pass critical information pertaining to on-scene conditions prior to Station Miami Beach and CGC CHANDERLUR arriving on scene.

In June 2005, the Organization of American States (OAS) foreign delegate meeting convened in Fort Lauderdale at the waterfront Broward Convention Center. President Bush, Secretary of State Condo-

the event, the Sensor Manager detected suspicious behavior on the jetties. Officers were dispatched and found three subjects who were arrested for possession of a controlled substance.

In July 2005 the Sensor Manager was scanning the Miami anchorage and spotted a large waterspout off of Miami Beach. The Sensor Manager tracked the waterspout providing the Sector Command Center watchstanders real time information and an urgent marine information broadcast (UMIB) was issued

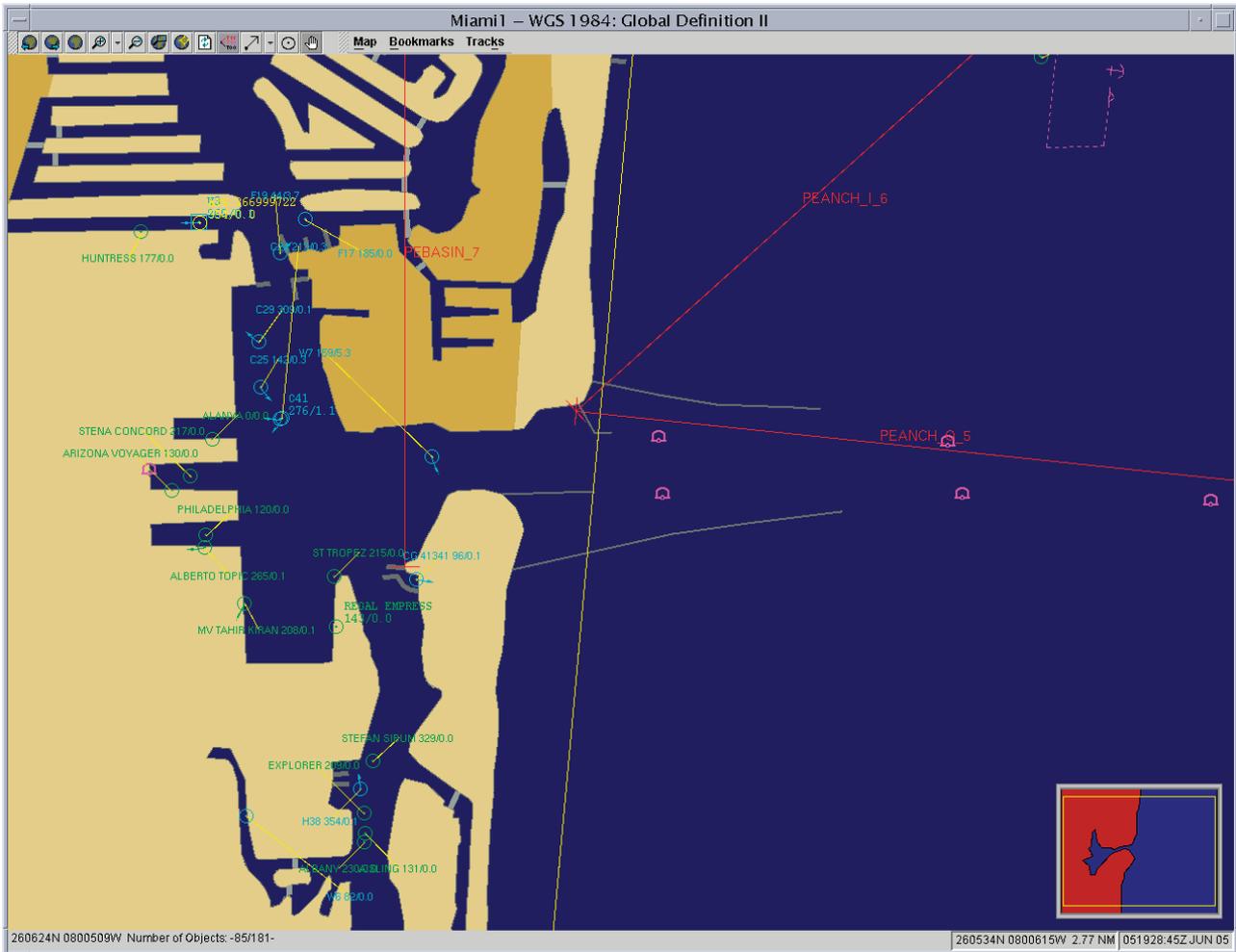


Figure 3: Blue Force Tracking in Port Everglades

alerting the public of the potential threat. The ability to track the waterspout with HAWKEYE allowed the Sector Command Center to provide early warning to the boating public, which ensured that all boaters in the area were warned in time to seek shelter.

There have also been numerous incidents of vessels greater than 300 gross-tons entering the anchorage areas without working Automated Identification System (AIS) equipment. These vessels were detected by HAWKEYE's RADAR and cameras, which resulted in a Notice of Violation being issued for the ship violating the SOLAS AIS requirement. Also, High Interest Vessels (HIV) attempting to enter the port without permission were immediately detected and ordered out of the port when RADAR, cameras and AIS showed them inbound.

The Maritime Domain Awareness staff at Coast Guard Headquarters, C2CEN, and the Research and Development Center are committed to improving

HAWKEYE by continuously upgrading and improving HAWKEYE procedures, hardware and software. It provides another resource for on-scene information and should be used in conjunction with information from response assets who can take appropriate enforcement action. Sector Miami is learning to use this new tool in innovative ways across many missions to improve maritime domain awareness and share lessons learned with other Sector Command Centers.

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 .

Hurricane Katrina: Search and Rescue Under Fire

“I could hear the bullets whizzing past my head”

By Coast Guard Public Affairs Petty Officer 3rd Class James S. Harless

“I was part of a team providing security to a Nevada FEMA task force,” said Coast Guard Petty Officer 3rd Class John W. Jacobs. “I was about a block away when I heard shots fired in the task force’s direction. I ran to where they were and could hear the bullets hitting the ground behind me. I had no idea where the shots were coming from, so I had to leap behind a brick barricade for shelter. I could hear the bullets whizzing past my head. I called out to the person firing letting them know I was a petty officer with the U.S. Coast Guard, and if they continue to fire I will return fire. The people stopped firing, informed me they had put down their weapon and were in the house behind me. I informed the National Guard where the

shots were coming from, and they moved in to secure the area.” Jacobs has been in the Coast Guard just under four years and has been a gunners mate for just over a year. “When I was in gunners mate ‘A’ school I never imagined I would be working 16 to 20 hour days for three weeks straight, showering maybe four times during all of this and changing uniforms once a week,” said Jacobs. Jacobs is assigned to a port security unit with Coast Guard Marine Safety Office New Orleans and responded to the call of duty just three days after Katrina struck the Gulf coast. Jacobs left his father and grandmother in Maccomb, Miss., who were facing problems of their own due to the hurricane. “I felt like it was my personal responsibility to come down here and do my part. I didn’t take my oath to sit on the sidelines,” Jacobs recalled. One the Coast Guard’s main missions is to save and preserve life – a mission that drew Jacobs to the Coast Guard. “Knowing I was able to take part in saving the lives of two men who were stuck inside of apartments really makes me feel good and makes me feel like I have made a difference,” said Jacobs. However, Jacobs does not consider himself a hero or someone who went above and beyond his call to duty. “I have seen some Coasties do amazing, great things down here, and we need to recognize them as soon as we can,” Jacobs added. “I just did what I was trained to do. – rescue people and preserve life.” Petty Officer 1st Class Chad Barber, a 10-year veteran, currently assigned to MSO New Orleans, was Jacobs’ team leader during Hurricane Katrina rescue efforts. “When I heard the gun shots, all I thought was, ‘Please do not let them be at Jacobs’”, Barber said. “Jacobs just got boarding team member qualified. For something like this to happen just makes me nervous, but he handled the situation perfectly. I have been able to work with a lot of young men during my time in the Coast Guard, but Petty Officer Jacobs’ passion for duty is what the term ‘Semper Paratus’ is about,” said Barber.



Petty Officer 3rd Class John Jacobs

TEAM COAST GUARD: Determination And New Technology Saves Two

By Joseph P. Cirone, Public Affairs Officer, Auxiliary Division 2

On Friday, June 10, 2005, two Florida men were returning to Fort Pierce, FL from White Sand Ridge, Bahamas on a 34-foot sport-fishing boat, named Extractor. The pair left the Bahamas two days earlier than planned, in hopes of avoiding a Tropical Storm, according to published reports. Trouble overcame the two boaters later that day, when their boat capsized.

With the aid of proven Search and Rescue (SAR) techniques; the steadfast persistence of Coast Guard SAR crews and controllers; and a dash of new technology, the men were rescued from the Atlantic Ocean the following day, after spending nearly 30 hours in the water.

Emergency Beacon Aboard

The Extractor was equipped with an emergency beacon, known as an Emergency Position Indicating Radio Beacon (EPIRB). EPIRBs are designed to begin transmitting soon after a boat capsizes or when manually activated during a distress or other emergency situation. Once activated, they transmit approximately 48 hours, before the battery fails.

First developed in the 1970s, the beacons are widely used in aircraft, on land, and at sea to send a distress signal to nearby aircraft, vessels and satellites, to alert Rescue Coordination Centers (RCC), around the world.

Once alerted, the appropriate RCC sends search and rescue units to the area to search for, locate and assist the distressed people. Depending on the type of emergency beacon utilized, the initial search area ranges between 450 square nautical miles for a 121.5 MHz beacon to less than one square nautical mile for a 406 MHz beacon equipped with GPS. Not all vessels are EPIRB-equipped, resulting in potentially larger initial search areas.

Team Coast Guard Aids New Technology Prototype Testing

Even with an EPIRB aboard, poor weather conditions; signal power; technology differences and other factors combine to make searching and locating distressed vessels and people difficult.

Modern EPIRBs transmit a 450 millisecond (nearly one-half second) distress signal burst, every 50 seconds. With aircraft direction finding equipment that incorporates the newer technology, the EPIRB is easily detected and located, according to Greg Johnson, a Coast Guard civilian employee in Charleston, SC.

An HC-130H Hercules from Coast Guard Air Station (AIRSTA) Elizabeth City with seven aircrew members and two technical specialists, took off aboard Hercules number 1504, and headed towards Charleston, SC, during the morning of April 30, 2005.

Five nautical miles off of Folly Beach, SC, a Coast Guard Auxiliary boatcrew, consisting of Robert Orenstein, the boat's coxswain, and crewmembers Robert J. Lovinger and Agnes Wright, worked with Johnson and Coast Guardsman John Campbell aboard Auxiliary vessel 8998, to deploy an EPIRB into the Atlantic Ocean.

For the next ten hours, the two crews conducted operational testing, evaluation and a proof of concept of an Automatic Direction Finder (ADF), being studied for possible use by the Coast Guard. The ADF was being tested to determine its reliability and ability to detect and home in on EPIRBs, further away and quicker than other methods and resources in use.

"The C-130 started getting the EPIRB signal about 80 miles away," according to auxiliarist Lovinger. The ADF - more properly, a Rockwell Collins DF-430F, allows aircrews to home in on the three international

emergency beacon distress frequencies, used by civilians and the military.

On that day, no one knew how important what they were doing would be, just a short time later.

Initial Alert

Five weeks after the ADF testing, the Coast Guard District Seven Operations Center (OPCEN) in Miami, FL received an emergency beacon signal near the coast of Fort Pierce, FL. A Coast Guard HU-25 Guardian (Falcon) jet and an HH-65A Dolphin helicopter were immediately launched from Air Station Miami, over 100 miles away, to begin conducting a search for the signal's origin.

Within a short time, the jet homed in on the signal and located a civilian aircraft which falsely activated its beacon. After having the errant beacon silenced, the OPCEN continued receiving a distress signal from the same vicinity. It directed the aircraft to continue searching the area for its source.

Throughout the return voyage to Florida, the Extractor's crew kept in radio contact with friends aboard another boat, also returning from the Bahamas. Around noon, the boats lost contact with one another.

Unable to reestablish radio contact with Extractor for the remainder of the voyage and six hours later, finding out that the Extractor still had not arrived at its destination, the Extractor's friends contacted Coast Guard Sector Miami to advise them of the situation and express their concern that something was wrong.

"The EPIRB signal and the trackline (route) of the overdue vessel were in the same vicinity. We quickly suspected a correlation," recalled Petty Officer 2nd Class Adriane Webb, one of the OPCEN SAR controllers who worked on the case.

With seven years in the Coast Guard, Webb's experience was invaluable during the conduct of the SAR case. According to Webb, being a SAR controller is one of the best and most challenging jobs in the service, one that she loves doing. "It's my calling,"

she proudly expressed. Her experience and the love for her job and the Coast Guard cause her to give it her all, in the pursuit of helping save lives. For the crew of the Extractor, she was the right person at the right time. Fortunately for mariners in peril, Webb is one of many Coast Guard people who are in the right place, at the right time.

Search Intensifies

"Because we continued to receive signals from an EPIRB in the area and we now had an actual report of an overdue vessel in that vicinity, Coast Guard Sector Miami civilian SAR controller, Mike Walker, worked closely with us to do a huge amount of investigative work," Webb said.

Additional Coast Guard SAR resources were launched and diverted to the area. The search intensified. SAR resources searched throughout the remainder of Friday and all day Saturday.

Ready, Set, Stop!

On Saturday, while the search continued, Lieutenant Commander Jim Duval and his crew of six others at Air Station Elizabeth City climbed aboard Hercules number 1504, to perform a training mission. During the pre-flight taxi, the aircraft generator malfunctioned. Duval stopped the mission, returned the plane to the hangar and turned it over to the duty maintenance crew for repair.

Aircraft Maintenance Crew Gives All

After many hours of searching without success and the EPIRB's battery wearing down, the OPCEN decided it was time to reach into its tool bag and try something different.

Webb and her supervisors knew about the successful April testing of the ADF. They called Air Station Elizabeth City to inquire about the availability of the 1504 and its experimental ADF.

LCDR Duval told the OPCEN he'd get back to them after conferring with the duty maintenance crew.

Less than 30 minutes later, the 1504 and its crew were airborne and heading to the search area, near Cape Canaveral, FL. “The maintenance crew saw the situation, understood the gravity of it, and really turned to and got the aircraft repaired, so we could help. They did a great job,” Duval said.

Weather Woes

Rough seas, churned up by the Tropical Storm, caused the Extractor to capsize, throwing its crew of two into the Atlantic Ocean. One of the men was quoted in two Miami, FL newspapers saying the boat capsized suddenly, after being hit with a pair of rouge waves that came from behind, flipping the boat and tossing them into the ocean. Once in the ocean, the cell phones and two-way radio they had aboard were rendered useless.

During the search, the storm worked its way up the west coast of Florida. Widespread rain and winds affected the search area off Florida’s east coast. “The weather was marginal, with seas approximately 10-foot high and breaking. We knew it was going to be hard to find a white-hulled boat in those white-capped breakers. In this case, we knew people with lifejackets on were going to be easier to spot than the boat itself,” Duval recalled.

The poor weather, with horizontal visibility less than one-quarter of a mile and vertical (air to ground/ocean) visibility just 200 to 225 feet, presented a safety concern for search units, according to Lieutenant Shawn Geraghty, pilot-in-command of Dolphin helicopter 6543. “It was really bad. At one point, we were forced to land until conditions improved a bit,” Geraghty stated.

As two Coast Guard cutters and numerous aircraft from three Coast Guard air stations searched for them, the men stayed afloat because of the lifejackets they wore. They stayed with their overturned boat, clinging to a line attached to it. To add buoyancy and comfort for their arms, they held onto square seat cushions, designed as throwable flotation devices.

According to published reports, they survived on water, soda, mentally supporting each other and, the will to live to see their families again. During their ordeal, the men’s hopes were raised for a short time, only to have them dashed again, when they saw a Coast Guard cutter searching nearby. The cutter was not able to see them in the stormy seas.

Electronics To The Rescue

Just north of Jacksonville, FL, at 16,000 feet above the ocean and still 100 nautical miles from the plane’s assigned search area, the 1504’s crew started picking up an EPIRB signal on the ADF. Because the EPIRB aboard Montz’s boat was not properly registered, its unique data signal was not able to be positively identified as the one belonging to the missing boat.

“EPIRBs save people’s lives, but they need to be registered, so we know what type of boat we are looking for; and have access to other important data that will help us find them. We can’t reinforce that message enough,” said Coast Guard Petty Officer 1st Class Anastasia Burns, of Public Affairs Detachment Miami.

“I kept wondering if this signal was from the vessel we were looking for or from another vessel in distress, not yet reported to the Coast Guard,” Duval recalled. According to Davis, “it was the first operational use of the ADF equipment since we tested it with the Auxiliary boatcrew.” Davis served as the co-pilot of the 1504 during both the test and the search and rescue case, so he knew how well the ADF worked.

With the ADF still in the testing and evaluation phase, the aircrew was hesitant to rely heavily on it. According to Duval, “we discussed the signal’s strength and possibilities of it being another vessel’s EPIRB. I was cautiously optimistic.”

The aircrew proceeded towards the signal, trying to determine whether the signal was from the Extractor or not. When the ADF indicated they were over the signal’s origin, “we corkscrewed down to 200 feet and saw them waving at us. We were glad to see that the two men were basically okay,” Duval proudly ex-

claimed.

A Big Difference Between Life And Death

In addition to wearing their bright orange lifejackets; utilizing an EPIRB and staying with the boat, the missing boaters utilized a green dye marker and deployed an orange distress flag into the water, once they heard the searching aircraft overhead, to attract attention.

After hearing about the rescue, Commodore Peter E. Fernandez of the Coast Guard Auxiliary's Seventh District in Miami, commented, "it seems they did the right things while awaiting rescue. The things we teach boaters to do. For example, we teach people to use their life jackets every time they go out on a boat. Unfortunately, not everyone does. If they wear them, they will most likely survive. We highly encourage everyone to wear them."

Fernandez stressed the importance of staying with a boat that capsizes so it presents a bigger target for rescuers to locate; and having an annual vessel safety check performed by a specially-trained member of the Auxiliary. The check ensures that the proper safety and survival equipment is aboard and in serviceable condition, so when it's needed, it can be used. "As it did in this case, it can make a big difference between life and death," Fernandez concluded.

Shifting Gears And Changing Focus

As the 1504 was performing its downward spiral to identify the source of the EPIRB signal, the 6543 was taking off from Patrick Air Force Base in Florida after refueling. The crew of the 6543 was in "search mode," focused on heading back to its assigned search area to execute a specific search pattern, given to them by the OPCEN.

Shortly after becoming airborne, the 6543 received a radio call from the 1504, asking them to rendezvous about 38 miles east of Merrit Island, FL. Certain they located two distressed boaters in the water, Duval called upon the 6543 to hoist the people from the water. In speaking about the 6543's aircrew, Du-

val stated, "They did a fantastic job at shifting gears and changing their focus from the search mode to the rescue mode."

Arriving on scene, Geraghty deployed Petty Officer 1st Class Ken Sullivan, 6543's rescue swimmer, into the water to assist the dehydrated and sunburned men into the rescue basket. Once safely in the basket, the men were hoisted by Petty Officer 3rd Class Brandon Day, the flight mechanic, into the hovering helicopter.

Communications Connections

Communications and coordination between the search and rescue aircraft, cutters, AIRSTAs and the OPCEN helped ensure a successful outcome.

While each of the on scene search units had communications with each other; operational messages between distant SAR units; the air stations and the OPCEN were handled by another important piece of Team Coast Guard - the Coast Guard Communication Area Master Station – Atlantic (CAMSLANT) in Chesapeake, VA.

As they do 24 hours-per-day, 365-days per year; and as their predecessors have done since 1924, specially-trained Coast Guard and Coast Guard Auxiliary communications watchstanders serve behind the scenes as a vital link in daily Coast Guard operations.

As the search for the Extractor and its crew intensified, communications and coordination also increased. At some points in the operation, especially near its conclusion, the CAMSLANT air to ground radio operator's actions resembled those of an octopus, with arms quickly moving between different radios, telephones and computers, relaying messages at a frantic pace.

Joyful Jubilation

When the 6543 was able to confirm that they hoisted the Extractor's crew, a feeling of joy and pride swept over all of those involved in the search and rescue case.

“At the first sighting, there was elation of the crew. They were excited when they spotted the two men in the water. It was an overwhelming feeling that we found them and they were safe,” Davis recalled.

At CAMSLANT, the air to ground radio operator (a Coast Guard auxiliary) and his active-duty counterparts were gleeful and filled with a deep sense of pride as a result of belonging to, and being an important part of, Team Coast Guard.

At the OPCEN, Petty Officer Webb and her colleagues had joyful jubilation. “I felt like I won the lottery,” exclaimed Webb. “When we told the family and friends the good news, there was cheering in the background. They were overjoyed,” recalled SAR controller Lieutenant Luis Gutierrez.

LCDR Duval, a former helicopter pilot, stated that even after many years of doing rescues, he still gets “happy, every time we help someone.” “It’s always nice to watch the faces on the new crewmembers when they think to themselves, ‘wow, I just helped save someone’s life,’” he added.

“There’s nothing more satisfying than seeing distressed people in the water and rescuing them,” according to Geraghty.

It’s Great When All Of The Pieces Come Together

OPCEN supervisor, Coast Guard Commander Jim Scheye, opined, “without the ADF on the 1504, this successful outcome might have been different.” Gutierrez observed, “the position reports we were getting relayed from the satellite were approximately 82 nautical miles north of the actual distress location, so the ADF really helped.” “All of the other aircraft crews were doing the right things, they just didn’t have the ADF gear we did,” Duval stated.

“If Mr. Johnson and a colleague at Air Station Elizabeth City hadn’t performed the advance work, the 1504 would not have had the prototype, we wouldn’t have known about it and it would not have been an

option to utilize”, Scheye stated. Upon hearing of the ADF’s role in the rescue, Johnson said, “I’m ecstatic.”

Reflecting upon the part they played in testing the ADF and ultimately, helping this rescue happen, auxiliary Orenstein stated, “it was one of the most significant and satisfying things I’ve done in my 25 years in the Auxiliary.” Auxiliary Lovinger said, “the active-duty Coast Guard often praises the Auxiliary for the contributions we make, but this was one time when I felt we really earned that praise. It helped them extend their effectiveness and mission success.”

In the Coast Guard, search and rescue training occurs frequently at every level. Not all search and rescue cases end successfully. During this case, all of the training paid off. Search crews battled an intense storm, worked long hours, and adapted to changing conditions, while ensuring safety, resulting in a successful rescue.

On the ground: “This is what we train and live for. This is the type of case outcome we want,” Gutierrez stated.

In the air: “All of the training was worth it. As we moved in to perform the rescue, it was so textbook. Everything flowed perfectly. You couldn’t ask for better,” Geraghty said.

Will Last Forever

“This is one of those things that will probably be part of our memory banks forever,” speculated Gutierrez. “I’m still shaking with joy,” Johnson said, nearly two months later.

Among those directly involved in the rescue, whether their memory about the case will last forever or not, remains to be seen. One thing is certain, for the survivors, the memory of their ordeal will last for some time to come, along with the good feelings about their rescuers and the U.S. Coast Guard – Team Coast Guard!

SEARCH AND RESCUE AWARDS

*The **Rescue Coordination Center Controller Award** is presented annually to district Coast Guard Search and Rescue planners that demonstrated the highest caliber of search and rescue expertise in the areas of investigation, search planning and search coordination. Selections are made based on performance during a single case with emphasis on: investigation and planning efforts, resource management, difficulties encountered and surmounted, and results of search planning efforts.*



2004

RCC CONTROLLER OF THE YEAR COAST GUARD DISTRICT SEVENTEEN COMMAND CENTER

LT Matthew Moorlag, LTJG Susan Parrish, OSC Diane Mowry, OS1 Douglas Green, OS2 David Foucault and Mr. Paul Webb are commended for their superb search planning skills, outstanding investigative work, and effective use of multiple federal, state and local resources which resulted in the rescue of four overdue hunters in an 18 foot skiff. On July 28th, 2004, North Pacific SAR Coordinator had already completed an extensive search of the Arctic coast from Barrow to Deadhorse, AK before they contacted the Seventeenth District Command Center to request Coast Guard assistance. The four missing men departed from Nuiqsut, AK on July 24th, 2004 on a three day walrus hunt but did not leave a float plan nor did they have Personal Locator Beacons or a VHF radio. The USCGC HEALY, with an embarked HH65, was 120 nautical miles from the search area and was diverted to aid in the search efforts. Skillfully utilizing computerized search planning tools, the Seventeenth District SAR controllers retraced the intended track of the vessel and applied drift corrections for the skiff. After making assumptions based on local knowledge and ice flows, an HC-130 from Air Station Kodiak and the HH65 from the USCGC HEALY were assigned parallel and shoreline search patterns but were still unable to locate the hunters.

On the morning of July 29, 2004, new searches were computed and assigned to an Air Station Kodiak HC-130, USCGC HEALY's HH65, an HC-130 from the U.S. Air Force 210th Rescue Squadron in Anchorage and a King Air fixed wing aircraft from North Slope Search & Rescue. Around noon the HH65 from the USCGC HEALY located the four men in their skiff inside the new search area, 32 nautical miles NW of the Colville River Delta. The skiff had suffered an engine starter casualty and had been adrift for three days. The HH65 recovered all four men were in good condition and transported them to their village in Nuiqsut. The entire town of Nuiqsut came out to greet them and thanked their rescuers. In the end, the Seventeenth Coast Guard District's Rescue Coordination Center SAR controllers coordinated 6 sorties, totaling 27 hours, which saturated over 3000 miles during the search efforts.

By using superb search planning skills, expertly managing multiple search assets, utilizing local knowledge, and by their skillful use of computerized search planning tools, the Seventeenth District's Rescue Coordination Center successfully located the hunters and prevented the loss of four young lives. The dedication and professionalism of all members of Coast Guard Seventeenth District Rescue Coordination Center SAR controllers are in keeping with the highest traditions of the U.S. Coast Guard.

SEARCH AND RESCUE AWARDS

The Search & Rescue Controller of the Year Award is presented annually to Sector/Group Coast Guard Search and Rescue planner that demonstrated the highest caliber of search and rescue expertise in the areas of investigation, search planning and search coordination. Selections are made based on performance during a single case with emphasis on: investigation and planning efforts, resource management, difficulties encountered and surmounted, and results of search planning efforts.



2004

SEARCH & RESCUE CONTROLLER OF THE YEAR



Operations Specialist First Class Samuel T. Bass of Coast Guard Group/Air Station North Bend, OR is recognized for his judicious management of multiple search assets, ingenuity, tenacity, and SAR planning skills. These skills led to the rescue of the captain of a 42-foot crab fishing vessel who had fallen overboard into the near 50 degree water of the North Pacific Ocean off the Oregon coast.

On February 29th, 2004, Coast Guard Station Yaquina Bay received a call from a person walking on the beach reporting that a fishing vessel was aground and breaking up in the surf just south of the Yaquina Bay south jetty. The station quickly notified the Group Duty Officer, Petty Officer Samuel T. Bass. Petty Officer Bass immediately diverted an HH-65 from Air Facility Newport, and dispatched a 47 foot Motor Life Boat (MLB) as well as a beach rescue unit from Station Yaquina Bay. Petty Officer Bass then directed an Urgent Marine Information Broadcast (UMIB) to be issued. Petty Officer Bass requested the District Command Center to investigate and identify the operator of the F/V Cathan however little useful information was found. Upon receiving radio conversations from on-scene assets, Petty Officer Bass quickly developed probable scenarios leading to the vessels grounding, and surmised that if someone was still on board the disintegrating vessel, they were not alive and refocused search efforts to looking for a person in the water. Numerous calls came in regarding the F/V Cathan's last known position. Based on good information of a last known position reported from a local vessel, Petty Officer Bass directed a second 47 ft MLB and the HH65 to commence a search between the F/V Cathan and the Alsea Bay. With daylight running out and the survivability time of a person in 50 degree water decreasing, Petty Officer Bass launched a second aircraft from Group/Air Station North Bend and coordinated search patterns for the two aircraft to operate safely in the small search area as well as cover the area with the most probability to find the PIW. After six hours of being in the water, Captain Scott Morales was located clinging to a crab pot buoy in 20 fathoms of water and hoisted to safety. Captain Morales confirmed that he was the only person on board. Petty Officer Bass coordinated the transfer of Captain Morales to awaiting EMS. Captain Morales was treated for mild Hypothermia and released the next day.

Demonstrating superb search planning skills, Petty Officer Bass managed five SAR resources and demonstrated remarkable adaptability as he continually modified and refined search efforts to locate the captain of the F/V Cathan within two and a half hours. The dedication and professionalism of Petty Officer First Class Samuel T. Bass is in keeping with the highest traditions of the U.S. Coast Guard.

The United States Senate Recognizes Coast Guard's Response to Hurricane Katrina

Senate Resolution 246

109TH CONGRESS
1ST SESSION

S. RES. 246

To express the sense of the Senate regarding the missions and performance of the United States Coast Guard in responding to Hurricane Katrina.

IN THE SENATE OF THE UNITED STATES

SEPTEMBER 21, 2005

Ms. SNOWE (for herself, Ms. CANTWELL, Ms. MIKULSKI, Mr. INOUE, Mr. STEVENS, Mr. MARTINEZ, Mr. LOTT, and Ms. MURKOWSKI) submitted the following resolution; which was considered and agreed to

RESOLUTION

To express the sense of the Senate regarding the missions and performance of the United States Coast Guard in responding to Hurricane Katrina.

Whereas the United States Coast Guard has been charged by Congress with missions central to protecting the lives and well-being of individuals and communities in the United States, including protecting homeland security, conducting search and rescue of lives in danger, protecting marine environments from pollution, maintaining maritime safety and aids to navigation, enforcing Federal fishing laws, and intercepting illegal drugs and migrants before they reach our shores;

Whereas the Coast Guard anticipated the potential for significant loss of life and property as Hurricane Katrina approached Louisiana, Mississippi, and Alabama and made landfall on August 29, 2005, and, in advance of the storm, relocated its personnel, vessels, and aircraft out of harm's way;

Whereas Hurricane Katrina made landfall as a Category 4 hurricane with winds reaching 175 miles per hour and massive storm surges, the combination of which left a trail of devastation unprecedented on United States soil, as it leveled countless homes, businesses, and other structures, displaced millions of people from their communities, and otherwise made coastal urban and rural areas unliveable;

Whereas the Coast Guard immediately deployed nearly 1,000 personnel, including captains, crew, pilots, rescue swimmers, pollution response teams, and other specialists and reservists, from stations all over the country, to coastal areas affected by the hurricane, for a total regional force size of approximately 3,619 personnel;

Whereas Coast Guard personnel who had never personally worked together before began to work as teams to conduct and coordinate search and rescue operations while Hurricane Katrina continued to bear down on the central Gulf of Mexico shoreline;

Whereas the Coast Guard rescued or evacuated 33,544 individuals as of September 21, 2005, a number that represents eight times the number of lives saved by the Coast Guard in an average year;

Whereas three Coast Guard pollution response Strike Teams responded to 1,129 pollution incidents as of September 20, 2005, which include total discharges of more than 7 million gallons of oil, unknown amounts of sewage, and unknown quantities of other toxic chemicals, and the Coast Guard has contained or otherwise closed 426 of these cases;

Whereas Coast Guard buoy tenders have responded to 964 discrepancies in buoys and other aids to navigation and have restored 39 of 48 critical aids to navigation as of September 21, 2005;

Whereas the costs of responding to Hurricane Katrina have depleted the Coast Guard's operations and maintenance budget for fiscal year 2005 and are rapidly depleting its budget for fiscal year 2006, and the Coast Guard's costs associated with this hurricane are anticipated to exceed \$500 million;

Whereas the Coast Guard performed its hurricane response missions largely with outdated legacy assets, increasing the wear and tear on these assets while foregoing regularly scheduled maintenance activities in the interest of sustaining its surge in life-saving operations;

Whereas the Coast Guard already conducts its missions with the 40th oldest fleet of the 42 nations with Coast Guard or naval fleets;

Whereas the Coast Guard's program, known as Deepwater, for modernizing its fleet of vessels and aircraft, is vital for increasing the capabilities in performing its missions in the face of ever-increasing natural and human threats;

Whereas the Deepwater program requires sustained Federal funding commitments in order for the citizens of the United States to realize the benefits of the Coast Guard having state-of-the-art vessels, aircraft, technologies, and interoperable communication equipment;

Whereas in addition to covering operation and maintenance costs of a rapidly aging fleet, the Coast Guard needs to rebuild several Coast Guard facilities in Louisiana, Mississippi, and Alabama, including Station Gulfport which was completely destroyed and where personnel are now working in trailers amidst the ruins of that station;

Whereas the Coast Guard needs a strong Federal funding commitment to ensure that all of its unexpected expenditures during its response to Katrina are reimbursed;

Whereas more than 700 Coast Guard personnel stationed in the Gulf region lost their homes and all personal property and are now living on overcrowded Coast Guard vessels and in makeshift shelters;

Whereas before, during, and after the landfall of Hurricane Katrina, Coast Guard personnel exhibited determination and a full commitment to their missions, and the Coast Guard has proven to be one of the most resourceful and capable services in the United States government;

Whereas before, during, and after the landfall of Hurricane Katrina, Coast Guard personnel performed their missions with the highest level of bravery and self-sacrifice, and their effectiveness in performing their

missions is unparalleled in the United States government;

Whereas the Coast Guard has an operational and command structure that allowed it to quickly take a leadership role in saving lives, without waiting for instruction or permission to act;

Whereas the Coast Guard's operational and command structure continues to serve as a model for other agencies that need to respond quickly to large-scale natural and man-made disasters; and

Whereas the Coast Guard's effective leadership in responding to the aftermath of Hurricane Katrina, and the appointment of Vice Admiral Thad Allen as the primary Federal officer in charge of this response, is helping to restore the public's confidence in the Federal response effort: Now, therefore, be it

1 *Resolved, by the Senate,* That it is the sense of the
2 Senate that—

3 (1) the United States Coast Guard should re-
4 ceive Congress's highest commendation for its tre-
5 mendous and highly effective response to the events
6 surrounding Hurricane Katrina;

7 (2) the United States Congress should commit
8 to providing the Coast Guard with the resources it
9 needs to modernize and maintain its fleet of vessels
10 and aircraft; and

11 (3) the Administration should ensure that the
12 Coast Guard receives sufficient funding to cover its
1 unexpected operational and capital costs associated
2 with Hurricane Katrina.

E-SAR: Coming To A Website Near You!

By Mr. Chris White

Search and Rescue Training Specialist
National Search and Rescue School

In the spring of 2003, the National Search and Rescue (SAR) School submitted an article on the significant technological advances made in the field of search and rescue since the school's inception in 1966, particularly in the field of computerized drift calculations and search planning.

Since then, the search and rescue program has made even greater strides to increase a distressed person's chances of survival by narrowing the search area size through more accurate drift calculations. From the soon-to-be-released SAROPS program which combines the capabilities of CASP and JAWS, to the Rescue-21 program which will dramatically improve the communications capabilities and reduce the number of uncorrelated distress cases, the theory of search planning has certainly come a long way.

Since 9-11 the Coast Guard has made major changes that have affected us all, including a dramatic increase in our personnel count, an expansion of our infrastructure, and the creation of Sector Commands. The Sector Command combines Logistics, Response, and Prevention under one roof. This concept spawned a new Sector Command training course which provides training on each aspect of the Sector Command. It also generated a much higher demand in the number of SAR Planners required to staff the Sector's Command Center.

In the midst of the numerous advances being made in the field of search and rescue, the National SAR School has been tasked with increasing its throughput of prospective SAR Planners. In order to satisfy this need, the SAR School has expanded the number of Maritime Search Planning resident classrooms from two to three. Along with this upgrade, the size of the SAR School staff has also increased to include six officers, eight enlisted, three civilian and two Auxiliary personnel.

Because the Search Coordination & Execution

(SC&E) course (or its alternative, the SAR fundamentals correspondence course) is a prerequisite for qualification as small boat coxswain and aircraft commander, the demand to provide SC&E training to all seeking these qualifications greatly exceeds the SAR School's capability to meet this demand. By presenting the SC&E course online, the National SAR School expects to meet its goal of providing the highest quality training to as many prospective small boat Coxswains and Aircraft Commanders as possible.



In order to meet these training needs, the National SAR School has teamed up with Training Center Yorktown's Performance Technology Center (PTC) to develop an online version of the SC&E course, dubbed "E-SAR". Over the past two years, a team of contractors has been creating this state of the art interactive program designed to train potential On Scene Coordinators.

While there is no substitute for a classroom environment with instructors on hand, even visiting the field units 20 times annually is still not enough to hit every Coxswain, Patrol Boat & Aircraft Commander in the field.

That's where E-SAR comes into play...

The E-SAR online course is the closest thing to a virtual classroom available. Let's say that the SAR School had just visited your District to present the SC&E course. New personnel arriving after the SC&E course had been taught would have to wait months for the next available training within their district.

With the availability of the on-line E-SAR program, personnel will be able to take the SC&E virtual course at their convenience, eliminating delays in their qualification process. The E-SAR program will include the same course material taught at the SC&E course.

Course content includes: SAR System Organization, Maritime SAR Policy, SRSAT System, SAR Communications, Flare Incidents, Introduction to Search Planning, Basic Search Planning Variables, Search Patterns, SAR Operations, On Scene Coordinator Duties, Surface & Aviation Resources, Uncorrelated Distress, and Risk Management. The goal of this program is to provide quality training to every Coast Guard member who could be required to act as On Scene Coordinator.

The system is made possible by providing a login for every Coast Guard user. One major advantage is that the program will be available from any internet connection at <http://learning.uscg.mil>. Once a student has begun the course, he/she will be able to log out and return to the course where they left off at a later date.

The training system utilizes an interactive program called Inquisiq. Inquisiq provides learner tracking services for self-directed content. The system tracks course completion and will be able to monitor and report who and when personnel have taken the course. Another feature of Inquisiq is its capability to record module scores as well as a final score.

The key personnel involved in the E-SAR course development are Susan Finley (Instructional Systems Design) and Anita Moseley (Instructional Systems Specialist) of “Solution Unitech”, and Chris White (Search and Rescue Training Specialist) of the National SAR School as the subject matter expert.

Training Center Yorktown’s Performance Technology Center is currently investigating possible ties between Inquisiq and other system components that would enable a ship’s crew to engage the Inquisiq program while underway.

Provided there are no unforeseen delays, the E-SAR program will be “field tested” by end of year. If all goes well, it will be presented to the field sometime early 2006.

The National Search and Rescue School’s mission: To present all aspects of the broad spectrum of the Search and Rescue field to all students of diversified backgrounds and experience levels – and thereby provide uniform training in the operating procedures, techniques and equipment employed in the saving of life and property”. We believe that the E-SAR program is definitely a step forward in the true spirit of our mission statement.

From the staff here at the National SAR School, Hit it hard & Hit it fast!

COMMAND CENTER STANDARDIZATION TEAM: “THE WAY AHEAD”

By LT Kevin Morgan

Supervisor Command Center Standardization Team

As a component of the National SAR School and result of the tragic Morning Dew case, the Command Center Standardization Team (CCST) has focused primarily on SAR during its five-year existence. In the post 9-11 era, command center duty has changed significantly from that of a predominantly SAR-focused mission. The time has come for the expansion of the CCST evaluation to include all command center duties.

During the last week of June 2005, G-OPR partnered with the CCST to host a “Command Center Summit” involving command center professionals throughout the Coast Guard to address, among other issues, the development and implementation of an expanded CCST review to begin in FY06. During FY06, the CCST will transition from a SAR-only evaluation to include a multi-mission standardization review, featuring non-SAR mission training and information gathering/sharing on best practices to further support the development of the standardization program.

From October to December 2005, the CCST will conduct one-day Command Center Transition Assist Visits (CCTAV) at each District to provide a demonstration and field questions on how future standardization visits will be conducted. The CCTAV is intended for all Area/District command center supervisors and all Sector, Sector Field Office and remaining legacy Group command center/communications center supervisors. The CCST representatives will outline the expanded process by reviewing the new inspection checksheet, demonstrating the SAR evaluation process and providing an overview of the training curriculum. This is a perfect opportunity for supervisors to find out what to expect during their next STAN visit.

We are approaching the expansion of the CCST review in phases. From January 2006 to May 2007 (Phase I), the CCST will visit every command center

in the Coast Guard. The visit will still include a SAR evaluation and an administrative review based on the CCST checksheet. During Phase I, watchstanders will also receive training in the other missions com-



Watchstander at Sector New York's Command Center

mand centers manage. Due to unanimous requests from the field to be evaluated in the manner they actually stand watch, the SAR evaluation will no longer be individual testing. We plan to evaluate a “watch team” during a SAR scenario from the “Awareness” stage throughout “Mission Conclusion.” In the future, as command center mission-related standards are developed and implemented for non-SAR missions, the CCST will begin incorporating those standards into the CCST evaluation process.

The CCST is committed to supporting the multi-mission needs of the command center program and will continue to work with HQ and the field to further improve the STAN process. The FY06/07 schedule and updated CCST checksheet can be accessed on the CCST website at: cgweb.tcyorktown.uscg.mil/SAR/CCST.asp

Questions regarding the checklist can be directed to LT Kevin Morgan at 757-856-2797 or LT John Corbett at 757-856-2296.

There We Were...

SAR In Humboldt Bay

By LCDR Jon Hammond

There we were...having a quiet Labor Day weekend duty day. At 2030 I stopped by the Operations Center to chat with the Group Duty Officer – very quiet – nothing brewing. Oh...a 35' sloop with 4 people on board about 60 nautical miles to the northwest transiting south from Canada reported high winds and seas – no distress. I headed out to the barracks to plan a backpack camping trip with my copilot. At 2130 the call came. The vessel had called in a Mayday. They were taking on water, unable to make any headway, felt they would capsize at any moment and wanted off.

Back in the Operations Center we did our normal preflight risk assessment. The weather at home was great, with no forecast of poor conditions anywhere, just the report from the vessel. The ready helicopter was in good shape; the crew was proficient and rested. Hard to believe the weather could be as bad as reported but with no other vessels in the area and dawn 9 hours off, it warranted an immediate look.

We put in the maximum fuel for our 4 man search and rescue (SAR) configuration and took off. Once away from the bright lights of McKinleyville, California we were on the gauges – it was a black moonless night with mostly green and white “snow” showing through our night vision goggles. What we could see of the ocean was blackness with only occasional whitecaps. We hailed the sailing vessel and starting homing on them as soon as they answered our radio call. I like to home on a vessel using direction finding equipment as soon as possible for several reasons; 1) you can immediately confirm the position of your target and preclude chasing around in the wrong direction burning fuel and time; 2) you can later isolate your target from others in the area, if applicable; 3) you can establish the procedures with your crew and the target should you have locate them after shooting a CATCH (computer approach to a coupled hover) or MATCH (man-

ual approach to a controlled hover); 4) you let the survivors hear “the siren down the street” and let them know that help is airborne and enroute. I’m glad we homed on them early – they were 20 nautical miles further out than reported.

We’d picked up a 45-knot headwind and the ocean was more visible with constant white caps showing below us. About 15 miles out from the new position we requested they shoot off a flare – we had nothing on radar and flares of course are a great location tool. My copilot and flight mechanic – both sharp, motivated aviators – had yet to see a flare on a SAR case so I felt it was a good idea all around. We slowed down to do our Landing/Hover check, NATCH (NVG aided approach to a controlled hover) and hoist brief when we saw the bright flare through our goggles. Heading for the source at 300’ we saw the vessel with normal navigational lights burning. Our look at the vessel confirmed that a NATCH would work so we shot one to a 70’ hover.

What we saw on scene was like nothing I’d ever seen before. The surreal violence of the wind and seas abusing the vessel is hard to describe. With 45+ knots buffeting our helo and radar altimeter fluctuations of 30 to 40 feet, I made a mental note to thank a buddy for his encouragement and assistance in ending my 2 year hiatus from the Coast Guard and leaving my job giving day, Visual Flight Rule tours of Grand Canyon National Park. (My biggest challenge there was coaxing a Jet Ranger loaded with the European Bratwurst Team off the 7000’ helo pad on the south rim, fighting the thermals over the canyon and clearing the 8100’ north rim.)



It was time for some serious Risk Assessment. First, hoisting to/from this 35' sloop with a 57' mast, at night, was something we were not going to attempt. Second, right now nobody was in the water...to affect this rescue our rescue swimmer and the vessel's crew would have to leave their current relative security and jump into cold, dark water 80 miles offshore in huge seas. We explained how perilous this rescue would be for all involved and suggested they ride it out or at least wait the 7 hours or so until dawn before evacuation. The experienced crew on the boat felt they wouldn't make it much longer in the current conditions and accepted the risk. They were willing to accept the risk – were we? We considered our options; the light of day attempt didn't work; there were no vessels available to assist; and we were eyewitnesses to the misery they were going through. As a crew, we decided to attempt the rescue. Next came the “how” part. To put the rescue swimmer downwind of the boat where the flight mechanic and I could have a nice hover reference would endanger the swimmer, as the boat would surely be blown over him. If we put the swimmer upwind, he would never catch the boat in the 50+ knot wind. That left delivering him immediately next to the boat. Next problem...the vessel was wallowing abeam the wind and seas with its bow pointing from right to left. That meant that the 57' mast in the forward portion of the boat was that much closer to where the helo had to deliver the swimmer. We asked the skipper if he could maneuver to place his stern where we wanted but he understandably declined due to the conditions. In order to get the swimmer close enough to the boat I would have to plan on going “lost target” with this vessel as we maneuvered over that big mast. Later review of the hoist-mounted camera audio revealed a severe case of “PICL”, Pilot Induced Cyclic Lockup, as we did fine up to “forward and right 15” where I seemed to hit my personal, no reference, stop. (We considered dropping a couple of Mark 25 floating flares for hover reference, but the rapid drift rate of the vessel as compared to the minimal drift of a flare made us choose not to try this.) We finally got close enough for the swimmer to release and swim to the upwind side of the stern cockpit. He coaxed the first crewman into the water and within seconds our hover reference became 2 people in the water as the vessel was blown

downwind.

The plan was for a basket recovery of the survivor with a harness recovery of the swimmer. After many conning commands by my patient flight mechanic, we got the basket to them and recovered the first survivor. The only visual reference the flight mechanic had to go by was a small green chemlight and a dimly spotlighted swimmer in the water who would periodically disappear from sight. His training and professionalism allowed him to stay focused on the hoist and keep the conning commands methodically coming in order to get the basket on target. He also quickly learned to judge the wavelength and period of the waves and adjusted normal procedures to make it work. You probably guessed that getting that 5 pound rescue strop to the swimmer in these conditions wouldn't work and it didn't – it just sailed aft like a kite. We recovered the swimmer with the basket and air taxied the quarter mile back to the vessel.



The swimmer confirmed that placing him abeam the vessel and not up or downwind was the right move – the erratic movement of the boat made it dangerous enough without purposely having the boat run him down or drift from him. He also reported that with seas that big and a strong wind, it wasn't prudent to put more than one survivor in the water with him at a time – as it was they were buried by the cresting waves every 15 seconds or so.

Having fully come to grips with the risk of these recoveries, we again asked the skipper of the sailboat if he didn't feel the risk of abandoning his vessel was greater than staying aboard, but he was adamant about getting off before she capsized. Having failed at my second Risk Assessment trick of keeping them onboard and delaying the rescue, we called back to

the Group Command Center to request a relief helo since we couldn't recover all 4 people due to our fuel state.

We then made another request of the vessel's skipper – would he reconsider repositioning his boat? This time the skipper gunned his engine, made a hard right turn and turned up swell, eventually putting his stern towards us and that mast farther away. We repeated the deployment sequence. That courageous repositioning maneuver made the deployment a lot safer for the swimmer and helo crew. We promptly recovered the second crewman and then the swimmer. With 5 minutes to “BINGO” – the fuel state which allowed us to return to base – we performed an instrument aided climb-out away from the black sea. At 500', we completed the level off check and I turned the controls over to my copilot – we had been hovering, on goggles for over an hour. The importance of a sharp copilot can't be overstated. During that hour in a hover, I rarely looked inside; I was focused on what outside references I could acquire with my goggles. Fuel calculations, engine parameters, aircraft relative altitude, communications and other factors were calmly monitored or handled by my copilot, making this a total team effort.

While the swimmer and flight mechanic treated the survivors for exposure suffered after plunging into the 55 degree water with only foul weather gear and life jackets on, up front we determined Air Station Humboldt Bay to be the best recovery point. Weather was good at home and we'd picked up a nice tailwind for the 80 mile transit.

We next contacted the relief helo we'd requested, a crew from Air Station North Bend. After updating them on the situation and on scene conditions I offered to share the techniques that had worked for us. The offer was gladly accepted and we gave what we could to help them with the rescue. They did the job well and landed an hour and a half later with the rest of the crew for a happy reunion.

What happened to the boat? It was recovered, intact, several days later. Did the crew need to come off when they did? Maybe, maybe not. A naval engineer

might be able to tell you whether taking 800 pounds of people off a boat that size would change the center of gravity enough to increase the stability of the vessel. But we used our experience, Crew Resource Management, and Risk Assessment principles to make the best decision we could. In this case, based on the high experience level of the vessel's crew and their request to get off in the violent conditions and the confidence we had in ourselves, we decided to remove the crew on our terms and not risk doing a search later for “people in the water”.

Coast Guard Sector/Air Station Humboldt Bay was commissioned on June 24, 1977 at the Arcata-Eureka Airport in McKinleyville, CA.

The Sector/Air Station serves the public along 250 miles of rugged coastline from the Mendocino - Sonoma County line north to the California - Oregon border.

The Command Center monitors for distress 24 hours a day and directs Coast Guard boats and aircraft to respond to any maritime emergency in the region-- along the coast, well offshore, or even inland. The Group / Air Station also works with many local, state and federal agencies as needed.

Sector Humboldt Bay currently oversees 3 helicopters, 2 patrol boats, and 4 motor lifeboats. An Aids to Navigation Team and a Marine Safety Detachment also serve the region. Twenty-two officers and over 170 enlisted personnel operate these various facilities located at Crescent City, McKinleyville, Samoa, Eureka, and Fort Bragg, California.

SAROPS on the Horizon

By Richard Schaefer and J.R. Frost

The Search and Rescue Optimal Planning System (SAROPS) is the next generation search planning tool for the Coast Guard. SAROPS will replace the combined legacy planning tools, Command and Control Personal Computer/Joint Automated Work Sheets (C2PC/JAWS) and Computer-Assisted Search Planning (CASP). Now entering the final phase of development, SAROPS represents a major leap forward in search planning capability.

Where is SAROPS?

The SAROPS development project began in the fall of 2003 as a two year project. If we were to follow the original development timeline, SAROPS would be deployed to the field during the winter-spring of 2006. However, based on a recent joint review of the software by the Coast Guard and contractor development team, the deployment date was pushed back to summer-fall 2006. This decision was based on a team consensus that although SAROPS was ready to move ahead with the minimal required technical capabilities, the graphical user interface (GUI) was not up to the level desired prior to deployment. In addition, some highly desirable technical capabilities could be added prior to first fielding given a little more time. This decision was in keeping with one of the SAR Program's primary objectives for SAROPS, to field it only when it is fully ready for use by search planning personnel at our Rescue Coordination Centers and Sector Command Centers. The original GUI looked and operated similarly to that of the current search planning software, C2PC/JAWS and CASP. However, SAROPS represents a new approach to the search planning problem with an improved flow of inputs, decisions and outputs. The new GUI likewise needs to emulate this improved search planning flow to be used effectively by search planners.

Talking About Improvements

SAROPS brings with it many advances over C2PC/

JAWS and CASP; much of it vastly improved behind the scenes algorithms and information not seen by the search planner but greatly affecting the development of search plans. What is seen are advances like a single selection for search objects for drift and detection (sweep width) purposes, the ability to model pre-distress motion with short DR tracks between a last known position/time and the distress time, and voyage tracks between waypoints and operational areas (in any order/combination). For voyages, encounters with user entered hazards that affect the transition of originating craft into search objects can also be modeled. Figure 1 provides a comparison of attributes between SAROPS, CASP and C2PC/JAWS search planning tools.

New Concepts are Key to SAROPS – A Problem in Motion

One of the major concepts that future SAROPS users will need to understand is the move from a static picture of drift positions, search areas and search and rescue units (SRUs) to a dynamic picture where motion is accounted for and used to plan searches and improve evaluation of completed searches.

SAROPS uses an advanced technique to evaluate completed searches and compute probabilities of success (POS). SAROPS generates lateral range curves (LRCs) using the existing sweep width tables and correction factors, along with some advanced mathematical techniques based on a re-analysis of all detection data we have available from various detection experiments. A lateral range curve plots the probability of detecting a search object as a function of its lateral range, or distance from the searcher at the closest point of approach (CPA). See Figure 2, (from the IAMSAR Manual) for examples of LRCs.

Like CASP, SAROPS employs a "Monte Carlo" simulation approach where thousands of simulated search objects (generically called "replications" in CASP and "particles" in SAROPS) follow independent drift trajectories based on samples from the possible

Figure 1. Comparison of SAROPS, CASP and C2PC/JAWS

Attributes	SAROPS	CASP	C2PC/JAWS
Search Object Selection	Multiple (Drift and Search combined)	Single for drift & separate Single for Search per situation	Single for Drift & separate Single for Search
Scenarios*	Multiple	Multiple “situations”	Single
Pre-distress Motion	Voyage (can include Opareas as well as positions as waypoints) & Last Know Position and Dead Reckoning Plot	No*	No
Hazard encounters	Yes	No	No
Search Object State Transition	Yes – originating craft to search object	No	No
Search Object Drift	“Monte Carlo” improved model	“Monte Carlo”	Point
Environmental Data	Automated, Environmental Data Server, multiple improved sources, provides continuous coverage from shore to deep ocean; manual input option	Limited automated wind & sea current climatology; manual input option	manual input single source only, tidal current option, sea current climatology option, option to average a few data points
Optimal Effort Allocation	Better	Good	Primitive
Completed Search Evaluation	Yes Moving SRU & Moving Search Objects	Yes Static - uniform	No
Accounts for previous search results when planning next search	Yes Greatly Improved (accounts for relative motion)	Yes	No
Animation	Yes	No	No

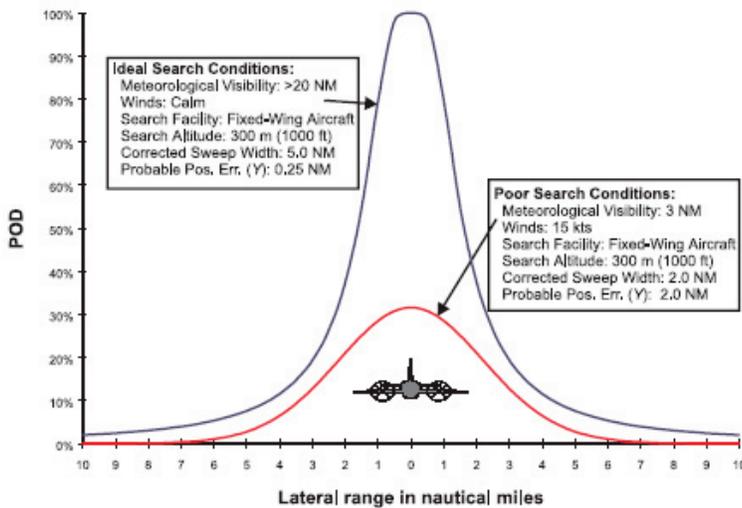


Figure 2.

ranges of wind, current, and leeway values. SAROPS actually "flies" each search craft through its assigned search pattern while simultaneously computing the CPAs between the sensor and each of the simulated search objects for each leg in the pattern. Based on these CPA values and the derived LRC, it then adjusts, for each simulated search object, the probability that it would not have been detected by all searching done so far. Adding these "Pfail" [probability of failure to detect] values, dividing the sum by the total number of simulated objects in use (for example, 10,000) and subtracting the result from 1.0 (100%) gives the cumulative POS for all searching done so far. A large advantage of this technique is SAROPS' ability to show the effects of relative motion between search craft and search objects during the search, both on the probability grid and in the POS values.

Motion and the advanced technique to evaluate completed searches will be of benefit not only in the search results, but also during evaluation, as a visual key to search planners of the effects of their plans. The following discussion and figures demonstrate how search object motion (drift) during a search and the choice of search leg orientation relative to that motion can have dramatic effects.

Note: All the illustrations in this article have the following things in common: All search patterns cover a 64 NM x 64 NM square, the assigned track spacing is 2.0 NM, the search speed is 128 knots (30 minutes for one search leg plus one cross leg), and the creep

rate is 4.0 knots. The search object in all cases has a sweep width of 5.0 NM. The probability maps are shown on grids with cells that are 8 minutes of latitude x 8 minutes of longitude. The exact same distribution of particles is used in all cases. The initial probability density distribution, except for "noise" in the random number generator, is perfectly uniform over the rectangle that contains colored cells. The parameters chosen for these illustrations allow us to show in dramatic terms on the 8-minute x 8-minute grid how important search object motion during a search really is and how important it is to choose the search pattern's orientation and commence search point relative to that motion. The search plan is not really practical (16 hours for a single aircraft). The constant, unchanging drift of 000T/4.0 knots is rare outside of the Florida Strait and may not be entirely realistic for other locales. However, neither is completely bogus and it is certainly possible to have equal drift and creep rates, especially when trying to achieve a reasonable coverage for objects with small sweep widths in areas with moderate to high drift rates. The very high nominal coverage of 2.5 is similarly unrealistic. It was chosen to ensure the results could be clearly and unequivocally seen by just looking at the cell colors in the probability grid.

In the past, the manual method, JAWS, and CASP all made one of two equivalent simplifying assumptions: Either

- a. The entire search was performed at a single instant in time, or
- b. All search objects stopped and remained stationary while SRUs were on scene searching.

This led search planners to believe that a certain portion of the search object distribution had been covered by the search pattern(s) at the computed coverage when in fact a significantly different portion had been covered, possibly at a significantly different coverage.

Figure 3 shows the initial distribution as of the commence search time (CST) for all the patterns that follow. Note the location of the distribution and the

search pattern relative to the shoreline shown (in the general area of Cape Hattaras) in this and subsequent illustrations.

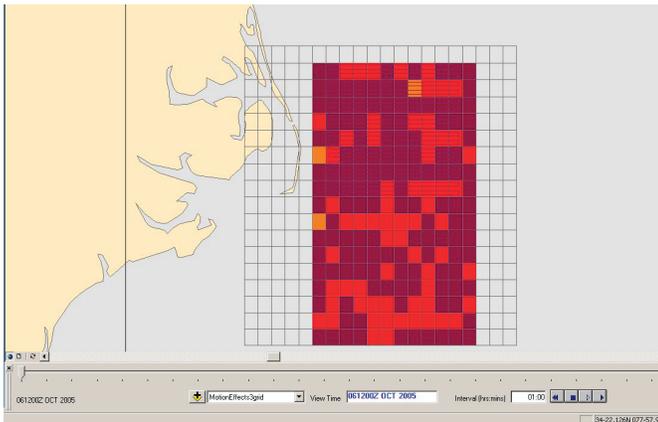


Figure 3. Probability Map (Nearly Uniform Distribution)

Figure 4 shows what search planners assumed they were getting all these years. Note that the distribution did not move during the search, just as all previous methods assumed. This is the answer that the manual method, JAWS, and CASP would all provide, assuming all were working with the uniform random distribution of particles depicted by the probability grid. In this case, the CSP was in the southwest corner and the creep was to the north. However, pattern orientation and choice of CSP would make no appreciable difference in this case for the manual method, JAWS, CASP or SAROPS since the distribution is truly stationary.

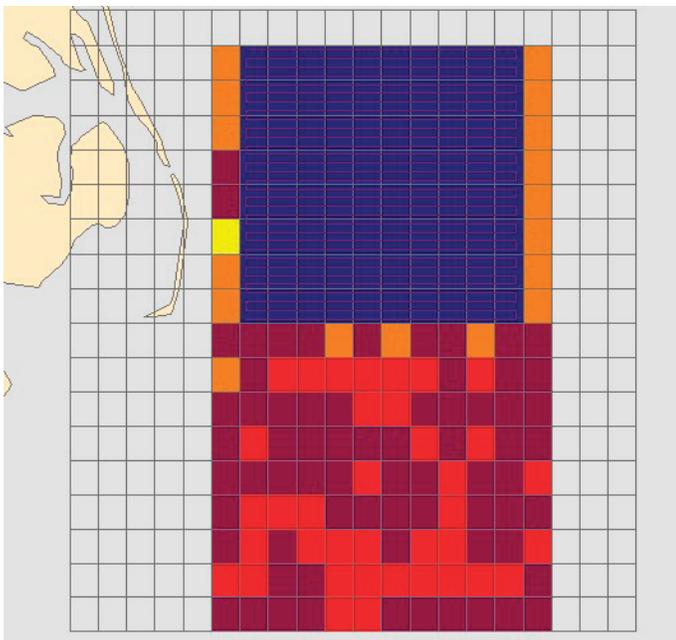


Figure 4. Search Results for Static Distribution (Pattern CSP SW Corner, Creep 000T/4.0 KTS)

Figure 5 shows what happens when the same pattern is applied to the same distribution, except that the distribution is moving north at four knots. Note that only a narrow band of the distribution is affected and that this band initially straddled the southern boundary of the search pattern's associated search area. This is because the aircraft was essentially flying a "coordinated" CSC pattern with respect to the particles at the center of the search area's southern boundary. The SRU was creeping north at four knots, exactly keeping up with the moving distribution. On a relative motion plot (not shown) the search legs would not be parallel relative to the distribution, but would have the "bow tie" shape familiar to radar operators controlling an aircraft in a CSC pattern. The coverage in the covered narrow band is extremely high—much greater than the nominal value of 2.5 computed from the sweep width and assigned track spacing, but the POS would be very low since the SRU approached relatively few particles closely many times while remaining far away from the vast majority of particles. Note that search object motion would affect neither the manual method, JAWS nor CASP—all would assume a result essentially identical to that on figure 4 even though the actual result on scene in a real search would be much more like that in figure 5.

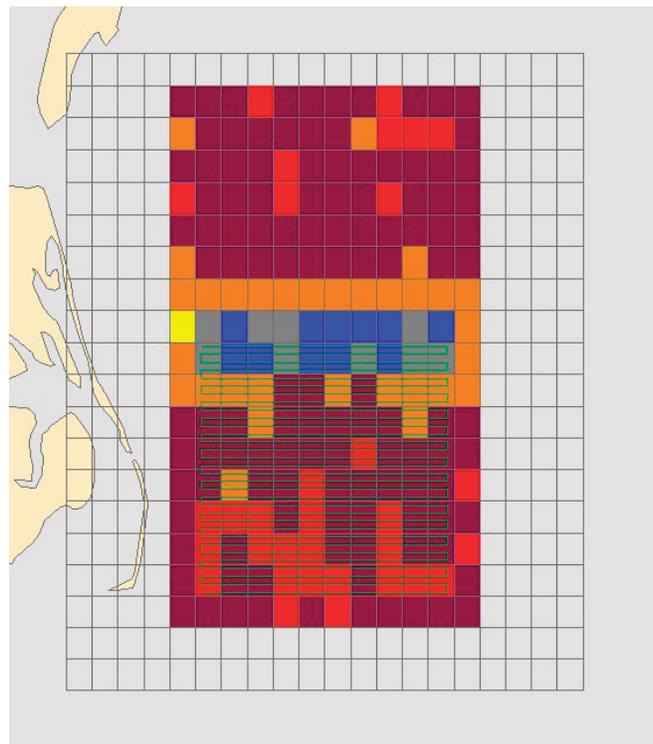


Figure 5. Search Results for Distribution Moving 000T/4.0 KTS (Pattern CSP SW Corner, Creep 000T/4.0 KTS)

Figure 6 shows what happens when the search pattern is re-oriented by 90 degrees so the search legs are parallel to the direction of drift. The CSP is still in the SW corner but now the direction of creep is 090T. Note the parallelogram shape of the area that actually contains the particles that came closest to the SRU during the search. The area of the parallelogram is exactly equal to the area of the square search area on figure 3 since its base and height are still 64 NM. The POS in this case would be very close to the value from the search in figure 4 (the static case), but the portion of the distribution actually covered is substantially different from that shown in figure 4. This would significantly affect decisions on where to place the next increment of available search effort. Neither the manual method, JAWS, nor CASP would show this phenomenon.

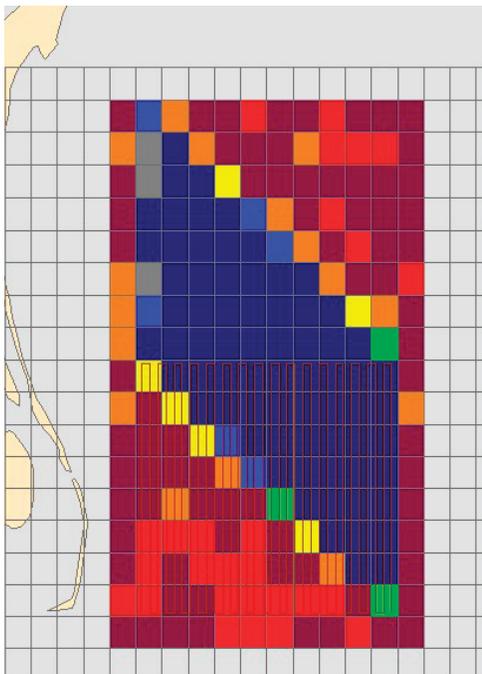


Figure 6. Search Results for Distribution Moving 000T/4.0 KTS (Pattern CSP SW Corner, Creep 090T/4.0 KTS)

Note that on a relative motion plot (not shown), the search legs would no longer be parallel relative to the moving objects, but would be angled as if the pattern had been grabbed by its southern-most leg and pulled down—thus opening the search legs like the bellows of an accordion and producing distances between pairs of adjacent tracks that vary from 2.0 NM where they are connected by a cross leg to 8.0 NM where they are not when plotted relative to the moving particles. This effect would not show itself in the manual method, JAWS or CASP.

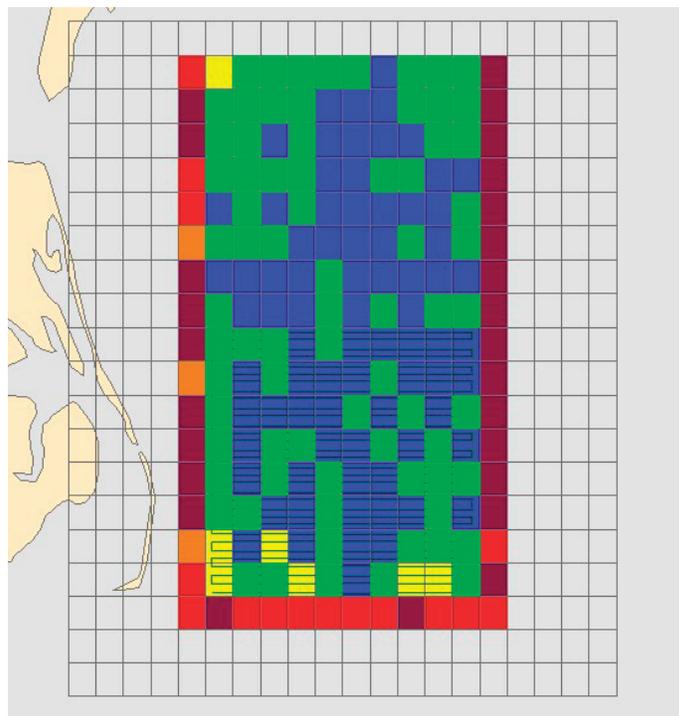


Figure 7. Search Results for Distribution Moving 000T/4.0 KTS (Pattern CSP NW Corner, Creep 180T/4.0 KTS)

Again, the purpose of these illustrations is to show that the covered area of a moving distribution is not always what search planners have assumed in the past from static plots on paper charts and static displays on computer screens. SAROPS is the only search planning tool in the world that models searching with sufficient realism to show, and account for, these effects. In addition, SAROPS animates drift and search updates on a one-hour time step, making it much easier to see and understand these effects.

The Coast Guard's Office of Search and Rescue is the Program Manager for SAROPS. For more information on SAROPS contact Mr. Rich Schaefer at 202-267-1089 or Mr. Jack Frost at 202-267-6702.

U. S. Coast Guard Search and Rescue: An Instrument of Public Diplomacy

By: Mr. Dave Edwards & CDR Steven Stilleke

As the United States government brings new focus to public diplomacy and its image abroad, the Coast Guard can take pride that it has well served this cause for many years. A 2003 General Accountability Office report defined “public diplomacy” as actions that “inform, engage, and influence global audiences. . . to reach out beyond foreign governments to promote better appreciation of the United States abroad, greater receptivity to U.S. policies among foreign publics and sustained access and influence in important sectors of foreign societies. Public diplomacy is carried out through a wide range of programs that employ person-to-person contacts.”

A noticeable aftereffect of the Cold War was the growth in the sincere desire by countries to provide effective and efficient search and rescue (SAR) services. Developing countries in particular came to realize the many benefits to providing capable SAR services, including economic and humanitarian benefits, and the positive perception by their citizens and the international community. Many countries in this situation, unaware of how to proceed, sought the advice of the U.S. Coast Guard.

At first glance some may ask, “why spend U.S. tax dollars or personnel time in a region far from home”? But in fact, this is an opportunity to recognize what the Coast Guard can do for public diplomacy. Our SAR expertise serves not only the greater good of the global community but in turn benefits our own nation.

Though formal “public diplomacy” initiatives are relatively new, we in the SAR program have a long history of successfully performing this vital mission. In our “Can Do” culture, and spirit of coordinating operational SAR efforts with “all available resources” (including other countries), we routinely perform a type of public diplomacy. This fact is clearly reflected in

the perception others have of the U.S. Coast Guard. It is not uncommon to hear reports of Coast Guard personnel being welcomed in a local community where other federal agencies may not be as well received, and for our SAR professionals to be actively engaged in international forums when other U.S. agencies were given a cold shoulder.

However, public diplomacy in the international arena is much more than just operational SAR response. It includes providing a positive presence and influence in many of the ongoing forums around the globe. Sometimes the Coast Guard’s Office of Search and Rescue may initiate efforts to attend, but more often than not, we are *invited* to attend. Recent examples include:

- The North Atlantic Treaty Organization (NATO) SAR Panel in which we provided the civil SAR expert as a member of the Department of Defense delegation. Participants were military and civil authorities from NATO member and Partnership for Peace countries. Now that NATO has expanded its regional views into a broader international context, our influence here now becomes global.
- The Asia-Pacific Heads of Maritime Safety Agencies (APHMSA) Forum which meets annually with the U.S. delegation led by the Assistant Commandant for Prevention (formerly G-M). Participating states have now successfully expanded the agenda to include SAR.
- The August, 2005 Caspian Sea SAR Workshop was a spin-off of the successful Maritime Safety Colloquium which used SAR as a “confidence building measure” among states in the Middle East. The U.S. Coast Guard was invited to the Caspian Sea region -- one of the original “Seven Seas” to the ancient mariners and a current area

of strategic importance to the U.S. -- based on the international regard for its SAR expertise. The participants held open and frank discussions, and the Russian hosts provided an in-depth briefing, tour, and photo-op in its rescue coordination center/operations center. All of which would have been viewed as impossible just a few years ago.

Tangible benefits of public diplomacy for the Coast Guard could be measured solely in terms of better response from, and cooperation with, the 28 nations and regions adjacent to our own SAR regions. However, there are even larger intangible benefits for the Coast Guard and our nation in general. SAR is viewed as a topic which can be discussed even amongst “less-than-friendly” countries. Coast Guard SAR professionals are viewed as “honest brokers” in these regions. This respect and trust is hard-earned and could easily be lost if we do not maintain our presence in such forums, or if we fail to measure up to that standard. By being active in public diplomacy we have been able to accomplish objectives such as:

- The introduction and explanation of the United States’ interpretation of international law; e.g., Maritime SAR Convention, and reinforced the principle of the rule of law.
- Provided documents which could serve as a basis for other countries to establish national search and rescue systems; e.g., National SAR Plan and our National SAR Committee (NSARC) process; and,
- Discussion of philosophy and policy on how for-



Mr. Dave Edwards pictured with Canadian and Russian officers at the Russian Rescue Coordination Center in Astrakhan on the Caspian Sea

foreign national governments can make use of “all available resources” to conduct SAR operations, both domestically and internationally, while not being viewed as a threat to local governments or neighboring countries (e.g., misperceptions about jurisdiction or sovereignty). Many aspects taken for granted in the United States’ system should not be assumed as common practice in other countries, such as the cooperation within the government (e.g., civil-military branches or the maritime-aeronautical SAR authorities).

Not only is the U.S. Coast Guard a world leader in maritime search and rescue, but also a unique instrument of U.S. foreign policy and a very visible force in the role of public diplomacy. The professionalism of SAR operations conducted by our field units and the spirit of cooperation displayed by our delegates in various forums around the globe have positioned the U.S. Coast Guard to be welcomed as advocates for advancing the goal of saving lives, and to act as Good Will ambassadors for our country.

Mr. Dave Edwards is assigned to the Coordination Division within the Coast Guard’s Office of Search and Rescue in Washington, DC.

The division is responsible for the SAR coordination with international, interagency, and other critical entities to achieve national and Coast Guard SAR objectives. The division is also the Coast Guard liaison for the management of the Cospas-Sarsat System, and operates Amver, the worldwide ship reporting system, to identify ships that can respond to persons in distress at sea.

U. S. COAST GUARD SAR PROGRAM INFORMATION

ON THE WEB

The SAR Watch - Office of Search and Rescue Newsletter (monthly)

The SAR Watch is a monthly newsletter designed to provide accurate, up-to-date highlights about important SAR program initiatives, along with other news and announcements of interest to our community of SAR professionals. From time to time, the newsletter will also include practical material for use by field SAR personnel. The SAR Watch compliments On Scene by providing a means to pass time sensitive information in a less formal format. The SAR Watch is accessible via the SAR home page via a link on the left side navigation bar.

SAR Publications:

SAR publications currently available via the SAR Program's web site include:

U.S. National SAR Plan (NSP) - The federal plan for coordinating civil search and rescue services to meet domestic needs and international commitments.

U.S. National Search and Rescue Supplement (NSS) to the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual - Provides guidance to federal agencies concerning implementation of the NSP and builds on the baseline established by the IAMSAR Manual. The NSS provides guidance to all federal forces, military and civilian, that support civil search and rescue operations.

U.S. Coast Guard Addendum (CGADD) to the U.S. National SAR Supplement - Establishes policy, guidelines, procedures and general information for Coast Guard use in search and rescue operations. The CGADD both compliments and supplements the NSS and IAMSAR.

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The Coast Guard Response To Hurricane Katrina



MOBILE, Ala. (Sept. 2, 2005) - President Bush receives a briefing from Coast Guard CAPT Dave Callahan, commanding officer of Coast Guard Aviation Training Center Mobile, on the status of helicopter operations staged out of the Coast Guard base. U.S. Coast Guard photograph by Petty Officer 2nd Class NyxoLyno Cangemi



NEW ORLEANS, La. (Sept. 29, 2005)- A Coast Guard HH-60 Jayhawk helicopter crew from Kodiak, Alaska, based out of Air Station Houston drops a sandbag to repair a damaged levee. The Coast Guard dropped 18,000 pounds of sand while working hand in hand with the National Guard to reconstruct the breached levees. U.S. Coast Guard photo by Christopher Evanson



ALEXANDRIA, La. (Aug. 29, 2005) - A Coast Guard disaster assistance response team from St. Louis begins unloading relief and response supplies from a Coast Guard C-130 aircraft at Alexandria International Airport.

The Time Tested Search and Rescue System Worked