

Coast Guard Set to Rejuvenate Ailing Fleet

Deepwater Project to Change the Way the Coast Guard Does Business

C. TYLER JONES

Semper paratus — always ready — is a great motto. But if the Coast Guard continues along the path it is on, a more accurate motto might read — always ready, but not operationally effective.

To avoid any such reputation, the country's oldest continuous seagoing Service is undertaking the largest acquisition effort in its history. Dubbed Deepwater, the project is designed to overhaul the Coast Guard's outdated assets — basically, its entire fleet of major cutters and aircraft and all its communications and observation equipment — and update or replace them with technology of the 21st century.

Coast Guard Capt. Craig L. Schnappinger, Deepwater Capability Replacement project manager, said that he will do whatever it takes to start seeing the benefits of Deepwater by 2002, because Coast Guard men and women are working hard and at times needlessly risking their lives. "I say needlessly because there's technology there that would make it easier and safer for them to do their jobs."

Schnappinger explained that the Coast Guard's deepwater-cutter fleet is the 38th oldest of 42 similar fleets in the world. Most of the ships in the Coast Guard's deepwater inventory were built between 1964 and 1972.

Jones is editor, Program Manager magazine, Visual Arts and Press Department, Division of College Administration and Services. He was the 1997 Military District of Washington Journalist of the Year.



CAPT. CRAIG L. SCHNAPPINGER, DEEPWATER CAPABILITY REPLACEMENT PROJECT MANAGER, REFLECTS ON THE DAUNTING TASK AHEAD OF HIM — THE LARGEST ACQUISITION EFFORT IN THE HISTORY OF THE COAST GUARD — AS HE LOOKS OUT OF HIS COAST GUARD HEADQUARTERS' OFFICE WINDOW IN WASHINGTON, D.C.

He said that ship age is not the worst of their problems. Their biggest shortfalls come in the area of command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR).

With the problems becoming more apparent with each mission, Coast Guard Operations initiated the Deepwater pro-

ject by performing a mission analysis report and a missions needs statement, he said. Significant gaps in the execution of missions in the deepwater environment were identified.

Operating Environments and Missions

Schnappinger said the Coast Guard has three operating environments: inland,

which covers rivers and lakes; coastal, which covers the area from the shore line to 50 miles out to sea; and deepwater, which is 50 miles or greater offshore and situations requiring long transits or extended duration on scene.

The Coast Guard has 14 major missions when it comes to operating in the deep-water environment. These missions are categorized as maritime safety, maritime law enforcement, marine environmental protection, and defense operations.

In times of war, Schnappinger explained, the Coast Guard, which normally falls under the Department of Transportation, becomes part of the Navy. He said the Navy has an interest in the Deepwater project and how it will affect the Coast Guard, because "if the big balloon goes up, we will sail with them in regular day-to-day ops," he said. One of the requirements of Deepwater is that the Coast Guard be interoperable with the Navy.

Most recently, the Coast Guard has been doing defense operations in the Persian Gulf. Schnappinger said DoD has been using them for contraband interdiction to enforce the embargo against Iraq. The Coast Guard has also performed missions in Bosnia and other Balkan states; and they've done joint training operations with Russia.

Out-of-Date Resources

Although their most recent missions with the Navy and DoD haven't been negatively affected because of outdated resources, other missions have.

Because the Coast Guard is operating with 1950-to-1960's technology, Schnappinger said, "Drug smugglers and others who do not want to be caught often have more technologically sophisticated equipment and boats than we do, making it harder to catch them." He explained that "even if we spot drug smugglers, we often have a hard time catching them because the 'bad guy's' cigarette boats can do 50 knots or faster."

At present, the Coast Guard stops 10 percent of the flow of illegal narcotics into

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LT. CMDR. MICHAEL H. ANDERSON, DEEPWATER PROJECT RESOURCES AND PLANNING, DISCUSSES ASPECTS OF THE DEEPWATER PROJECT WITH SCHNAPPINGER.

the country by maritime routes. Schnappinger said "The nation's drug-control strategy expects us to double that seizure rate by 2002." He added that "this is a tall order for our aging and technologically challenged fleet of assets."

In addition to stopping the flow of narcotics, the Coast Guard must also meet search-and-rescue mission requirements, such as being on scene within two hours of a distress call. "Are we capable of doing that? Not if we have our resources spread too thin," he said.

"The bottom line is that the demands for our services are currently greater than what we can provide," Schnappinger said. He added that "Because of the lack of resources, we've had to prioritize missions. For example, if we are doing a law enforcement drug-interdiction mission and we get a radio dispatch for a search-and-rescue case, priority-wise we will divert from the law enforcement mission to the search-and-rescue mission."

Lack of Assets

One area in particular where the Coast Guard falls short is with its surveillance and communications equipment. Schnappinger explained that "When we do law enforcement exercises, such as trying to spot drug smugglers in a particular area, we fly a manned aircraft overhead looking. But, we're not looking with radar; we're looking with our eyes because that's the level of sophistication we have." At night, line-of-sight visibility is especially limited.

Schnappinger explained that "a lot of things probably get missed using line of sight, so we also put out ships to patrol a particular area and do radar sweeps. But, if a contact does not want to be seen, they're not going to have a high radar cross-section; therefore we're going to have limited probability of seeing them."

Another problem that arises from depending on line-of-sight visibility is that it is hard for Coast Guard aircraft to avoid observation because they must fly close enough to a suspect vessel to make a visual identification.

DEEPWATER FROM REVENUE CUTTER SER



1 REVENUE CUTTER HARRIETT LANE, APRIL 1861

2 1890's REVENUE CUTTER BEAR ON BERING SEA PATROL

3 COAST GUARD CUTTER SENECA AROUND 1915 DOING DERELICT DESTRUCTION

4 REVENUE CUTTER SNOHOMISH EARLY 20TH CENTURY (PERHAPS AROUND 1910). EDITOR'S NOTE: REVENUE CUTTER SERVICE BECAME THE COAST GUARD IN 1915 - HENCE SOME ARE REVENUE CUTTERS AND OTHERS ARE COAST GUARD CUTTERS.

5 TREASURY CLASS CUTTER CAMPBELL ON CONVOY ESCORT DUTY DURING WWII

6 HAMILTON CLASS CUTTER CHASE

7 UNIDENTIFIED 1950's CUTTER ON OCEAN STATION DUTY

8 MULTI-HULL PLATFORMS ARE ONE OF MANY TECHNOLOGICAL INNOVATIONS BEING CONSIDERED IN DEEPWATER

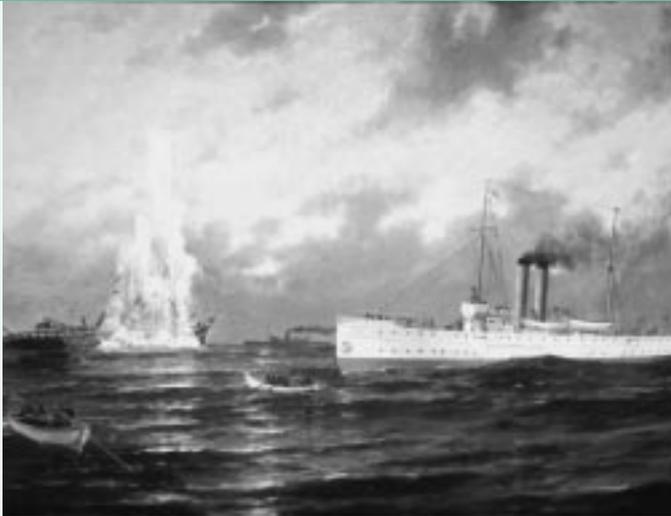
9 ARTIST RENDITION ILLUSTRATING FUTURE POSSIBILITIES FOR THE COAST GUARD



UTTER FLEET

VICE TO U.S. COAST GUARD

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CAPT. CRAIG L. SCHNAPPINGER

Deepwater Project Manager

Capt. Craig L. Schnappinger was appointed as the project manager for the Coast Guard's Deepwater Capability Replacement Project Feb. 1, 1997.

As the Deepwater Project Manager, he is responsible for the largest acquisition project in the history of the Coast Guard. This project marks the first time a federal agency has approached an acquisition from an entire mission perspective. The current assets replacement values range from \$7.5 to \$15 billion.

Schnappinger was born Feb. 12, 1953, in Baltimore, Md. He received his undergraduate degree from the U.S. Coast Guard Academy and earned a master's degree from the University of Illinois. He is a graduate of the Advanced Program Management Course, Defense Systems Management College, and brings extensive project management experience to the Deepwater project.

Prior to his current assignment, Schnappinger was selected as a member of the the Coast Guard's Reengineering Team, responsible for "right-sizing" the entire Coast Guard. His emphasis was base realignment and Support Center conversions. From 1992-96, he was assigned as chief civil engineer for the Pacific area. Previous assignments included: base engineer, Air Station Cape Cod; and assistant dean and associate professor, U.S. Coast Guard Academy.

Over his 22 years of service he has developed extensive experience in engineering, contracting, education, fiscal management, and project management. He has served on numerous international committees.

Schnappinger has three children and lives in Springfield, Va., with his wife, Patti.



the premier maritime Coast Guard Service in the world. But it isn't because of the technology. It isn't because of the platforms. It's really because of the individuals executing the missions."

A New Way Of Thinking

One thing that sets Deepwater apart is that it is a new way of thinking about acquisition. Instead of giving industry any detailed specifications, he said, they have stayed as close to system performance specifications as possible. "If you read our system performance spec ... with industry, it doesn't say that there is a ship in the mix, it doesn't say there's an aircraft. It says we have to have the capability to survey areas [and] to identify things in those areas ... That's a real simplistic thing."

The Coast Guard has given industry a clean piece of paper and said, "Here's what we must execute mission-wise. Come up with a concept and a system of assets that will allow us to execute those missions as effectively as possible and at the lowest total ownership cost," Schnappinger said.

"The idea is to challenge industry to be as creative as possible, to make them feel that they're part of the team ... that they are working with us to solve a problem that we, the Coast Guard, the nation has," he added.

Status Report

Deepwater is currently in the concept exploration phase. Schnappinger said they've passed their first milestone or Key Decision Point, which was getting approval for the mission analysis report and mission needs statement. He said that was done in 1996.

Schnappinger said a request for proposal was "put on the street" and contracts were awarded to three industry teams in August of 1998.

One team consists of Avondale Industries, Inc. (prime contractor); Boeing-McDonnell Douglas Corporation; John J. McMullen & Associates, Inc.; DAI, Inc.; and Raytheon Systems Company.

If it is determined that a vessel is "hot or tainted," the crew of the plane has to get that information to a ship that might be 50 miles away, because the suspect vessel can't be boarded from a plane. Schnappinger said, "We don't want to communicate in the clear, and the only way to communicate from air-to-surface is voice-to-voice not datalink-to-datalink. Frequently our air platforms can't get the surface platform in a secure voice link."

What happens then is that the plane must fly back to an air base, land, and verbally relay the information, which is then electronically teletyped over a secure wire to the communications center of the ship. "How long is that time duration from the time you identified and spotted the suspect vessel until it gets to

the ship that is actually going to interdict or pursue that vessel? Quite a while. How many of those do we miss? Quite a few," Schnappinger added.

One possible Deepwater solution to this problem is to use satellite coverage or unmanned aerial vehicle coverage to get the data and dispatch it to pursuit platforms — air or surface. Schnappinger said that will give the Coast Guard "the capability of knowing what's happening in maritime areas that we're responsible for monitoring, without having to have countless manned resources boring holes in the sky or basically getting beat up in the oceans in order to get that [the same information]."

Despite the Coast Guard's lack of assets, Schnappinger said, "Our belief is we are

Another team consists of Lockheed Martin Government Electronic Systems (prime contractor); Litton Ingalls Shipbuilding; Litton PRC; M. Rosenblatt & Son; Sperry Marine, Inc.; Litton Data Systems; Halter-Bollinger Joint Venture; Bell Helicopter Textron; Lockheed Martin Information Systems; Lockheed Martin Ocean Radar and Surveillance Systems; Lockheed Martin Sanders; Lockheed Martin Aeronautical Systems; Lockheed Martin Federal Systems; Lockheed Martin Management and Data Systems; LOGICON; L3 Communications, Inc.; and PROSOFT.

The third team consists of Science Applications International Corporation (prime contractor); Marinette Marine Corporation; Sikorsky Aircraft Corporation; Soza & Company, Ltd.; Bath Iron Works; CTM Automated Systems; AMSEC; Fuentez Systems Concepts, Inc.; Gibbs & Cox, Inc.; and Interactive Television Corporation.

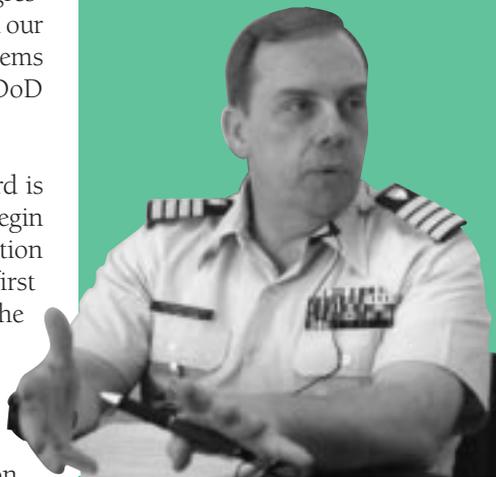
During the design process, the contractors will develop concepts for an Integrated Deepwater System. Schnappinger said the contracts include a 16-month conceptual design stage, immediately followed by a 16-month functional design stage.

Schnappinger said he is extremely pleased with the project so far. "We laid out what is probably the most aggressive acquisition schedule certainly in our history. From being at DSMC, it seems more aggressive than what most DoD projects work at."

Schnappinger said the Coast Guard is planning to award the contract to begin final detailed design and construction in 2002. Realistically, he said, the first ship would probably come out of the shipyard in 2005.

"However, since we're talking about a system of assets, industry could propose to provide new sensors on our air platforms, could introduce unmanned aerial vehicles, or lease into satellite data that could start to benefit the Coast Guard's C4ISR sensor equipment in late 2002 or early 2003."

"The biggest obstacle is probably going to be making government and private citizens realize what value the Coast Guard adds to the nation."



SCHNAPPINGER DISCUSSES DEEPWATER'S "AGGRESSIVE ACQUISITION SCHEDULE" DURING AN INTERVIEW WITH *PROGRAM MANAGER* MAGAZINE.

Obstacles

As with any acquisition project there are going to be obstacles, especially budgetary. According to Schnappinger, the biggest obstacle is probably going to be making government and private citizens realize what value the Coast Guard adds to the nation. They must educate and inform them that the Coast Guard can't continue to do business the same way it has in the past and be effective in the 21st century.

From talking to other DoD acquisition people and professors at DSMC, Schnappinger believes that in any project "you want to make sure that you truly capture total ownership cost, so [you] carry the design as far as you can before you select the winning team." Schnappinger said despite initial budgetary constraints "we have recently modified our contracting strategy to double the duration of the Deepwater design process."

The DSMC Edge

Schnappinger said his time at the Defense Systems Management College was beneficial. The difficult part was the first few weeks when he had to walk around with a glossary because terms and acronyms he had never heard before were flying at him from all directions.

Throughout his Coast Guard acquisition career, Schnappinger has tried to keep some contacts at DSMC and use them in an advisory capacity. Although he learned a lot during his time at DSMC, he often found it challenging because the acquisition language and practices the Coast Guard uses are different in some areas than what DSMC teaches. He added, "It would be real valuable if there were a group of people over there [at DSMC] that understood Coast Guard acquisition [and] our budget process a little better so that I could use them kind of as an expert advisor/think tank."

Only Time Will Tell

"If I want to be remembered for something, it's that we've given the men and women of the Coast Guard the tools they need to get their job done safer and more efficiently," Schnappinger concluded.