Air Surveillance Radar Successfully Tracks First Targets at Wallops Island

SPY-6(V)2, Enterprise Air Surveillance Radar (EASR), recently completed its first system-level tests. The Raytheon Co.

WALLOPS ISLAND TEST FACILITY, Va. – Raytheon Co. and the U.S. Navy completed the first system-level tests of SPY-6(V)2, the Enterprise Air Surveillance Radar (EASR), at the Surface Combat System Center at Wallops Island, Virginia, Raytheon said in a statement.

In the first test the radar searched for, detected, identified and tracked numerous targets – including commercial aircraft. In a second exercise, the maturity of EASR integration enabled the radar to track multiple targets continuously for several hours during a test involving another system.

EASR, the newest sensor in the Navy's SPY-6 family of radars, provides simultaneous anti-air and anti-surface warfare, electronic protection and air traffic control for aircraft carriers and amphibious warfare ships.

"Moving quickly from radar installation at Wallops Island to 'tracks on glass' in less than three months is a major accomplishment," said Navy Capt.

Jason Hall, program manager for above water sensors, Program Executive Office Integrated Warfare Systems. “The EASR program is progressing extremely well. We are now one step closer to production and delivering the radar’s unmatched capability to the surface fleet.”

Two variants of EASR are being built: a single-face rotating array designated AN/SPY-6(V)2 for amphibious assault ships and Nimitz-class carriers and a three fixed-face array designated AN/SPY-6(V)3 for Gerald R. Ford-class aircraft carriers and the future FFG(X) guided missile frigates.

Both versions of EASR are built on scalable Radar Modular Assembly, or RMA, technology as well as a software baseline that has been matured through development and test successes of AN/SPY-6(V)1, the Navy’s program of record for the DDG 51 Flight III destroyers. These individual radars can integrate to form arrays of various sizes to address any mission on any ship. EASR also adds air traffic control and weather capabilities to the mature SPY-6 software baseline.

Upon completion of system-level testing in the fourth quarter of 2019, EASR will shift from the engineering and manufacturing development phase to the production phase. The first delivery of AN/SPY-6(V)2 will be to LHA 8, the third America-class amphibious assault ship.

Coast Guard Patrols North Pacific in Support of International Fisheries

A boarding team aboard an over-the-horizon cutter boat from U.S. Coast Guard Cutter Mellon (WHEC-717) navigates toward a fishing vessel to conduct an at-sea boarding in the North Pacific Ocean on Aug. 13. U.S. Coast Guard

JUNEAU, Alaska – The crew of Coast Guard Cutter Mellon (WHEC-717) continues their North Pacific patrol in support of Operation North Pacific Guard (NPG) 2019, protecting living marine resources, enforcing international fisheries agreements and conducting global security missions, the Coast Guard 17th District said in a statement.

Since June, Mellon's crew has conducted 40 boardings and issued 61 violations. A total of 25 were serious violations because of their potential to severely impact fisheries and/or blatant disregard for conservation and management measures. Their most frequent violations were improper vessel marking (9), illegal shark finning (4) and improper use of or intentional tampering with the vessel monitoring system (2).

"These fisheries patrols are vital to demonstrating the U.S. commitment to our regional partnerships while strengthening regional maritime governance and promoting sustainability of living marine resources," said Capt. Jonathan Musman, commanding officer of Mellon.

“I’m extremely proud of the work we’ve done this patrol, and it’s a direct result of the hard work of this crew as well as the continued support of our international partners. Together, we’ve put in a lot of hours and a lot of work, and we’ve seen impressive results because of it.”

> *“These fisheries patrols are vital to demonstrating the U.S. commitment to our regional partnerships while strengthening regional maritime governance and promoting sustainability of living marine resources.”*
>
> *Capt. Jonathan Musman, commanding officer of Mellon*

Mellon’s deployment is in support of U.S. goals for the conservation and management of high seas fisheries resources to eliminate illegal, unreported and unregulated (IUU) fishing activity from the North Pacific.

NPG 2019 showcases a multimission effort between the Coast Guard, NOAA, Alaska Department of Fish and Game, five Pacific Rim countries and three regional fisheries management organizations. Unlike previous years’ operations, Mellon has conducted high-seas boardings and inspections on the North Pacific Fisheries Commission fishing vessels, while continuing to conduct Western and Central Pacific Fisheries Commission boardings.

“We’ve seen a 344% increase in boardings and 867% increase in violations compared to last year’s operation,” said Lt. Cdr. Kristen

Caldwell, living marine resource program manager for the Pacific Area. “This increase highlights the significance of employing differing authorities, all aimed at mitigation of IUU fishing, capitalizing on a highly capable resource to maximize time on scene and the targeting of IUU vessels.”

NPG 2019 was designed to conduct law-enforcement operations in support of RFMO in the North Pacific Ocean. Through the North Pacific Coast Guard Forum and North Pacific Anadromous Fish Commission’s enforcement coordination process, each partner nation contributes to this at-sea enforcement effort by providing surface patrols and/or air surveillance.

This operation is in direct support of the National Security Strategy as it aligns with the tenant of “achieving better outcomes in multilateral forums” as well as by addressing the risks to sovereignty of developing nations by China identified in the Indo-Pacific Region. The 2018 National Defense Strategy (NDS) also has identified China as a “strategic competitor using predatory economics to intimidate its neighbors while militarizing features in the South China Sea.” A goal of the NDS is to “support U.S. interagency approaches and work by, with, and through our allies and partners to secure U.S. interests and counteract this coercion.”

Due to the increasing threat, complexity and diversity of tactics in IUU fishing, it is critical to ensure oversight and

enforcement in
regions in which the United States has jurisdiction and authority to mitigate
the rapidly developing influence of specified fleets known to engage in IUU
fishing. Efforts to increase the ability of the United States to check the
threat of IUU fishing in the Pacific Ocean have been continuous, with the
recent success of the adoption of high-seas boarding inspections (HSBI) for the
Northern Pacific Fisheries Commission and continued efforts in the Western and
Central Pacific Fisheries Commission and North Pacific Anadromous Fish
Commission’s Convention Areas.

During NPG 2019, Mellon embarked two Canadian shipriders
from the Canadian Department of Fisheries and Oceans as well as two aircrews
from Coast Guard Air Station North Bend.

Mellon, a 378-foot high-endurance
cutter with a crew of 150, is homeported in Seattle and routinely deploys in
support of counter-drug and alien migrant interdiction, living marine resources
and search-and-rescue missions.

VT Group Awarded Navy Afloat

Global C4ISR Installations Contract

CHANTILLY, Va. – VT Group, a middle-market technology integrator and C4ISR solutions provider, has been named by Naval Information Warfare Systems Command (NAVWAR) as one of six award winners for an indefinite delivery, indefinite quantity contract.

VT Group will compete for work in the areas of afloat installation and integrated command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) systems aboard the U.S. Navy's growing fleet of surface ships and submarines. The contract vehicle has a ceiling value of $2.45 billion over a five-year base period and one five-year option period.

VT Group has a 50-year history providing the Navy with C4ISR solutions and full lifecycle engineering services – in the air, ashore and at sea. Its maritime solutions business has integrated C4ISR technologies aboard every existing class of warship and submarine, building differentiated expertise in undersea warfare platforms and systems.

"VT Group is proud of its longstanding partnership with the U.S. Navy," said John Hassoun, VT Group president and CEO.

"This award showcases our growing portfolio of fleet modernization capabilities and highlights the exceptional performance of our shipboard leaders and

technicians. We look forward to continuing to provide NAVWAR with the deck-plate innovations and engineering expertise they have come to expect from our team.”

New Special Assistant to Navy Secretary Will Oversee Cybersecurity

ARLINGTON, Va. — The U.S. Navy is creating a new high-level position in the office of the Navy secretary to oversee information management policy, including cybersecurity.
The position will be the special assistant for information management and will be given authorities on the level given to the four assistant secretaries of the Navy.

A person has been selected for the position and that person’s name will be announced in coming weeks, Navy Undersecretary Thomas B. Modly said when he spoke to reporters Aug. 16 at the Pentagon.

Navy Secretary Richard V. Spencer commissioned an independent cybersecurity study last year in the wake of some significant cyberbreaches in the industrial base. Spencer

sought the assessment to see how the Navy was doing in cybersecurity and how it should be organized to combat such threats.

“No one at a senior level had responsibility for this,” Modly said, noting that the CIO office was “more of a compliance shop, less for developing strategy.”

Modly said the Navy wanted to change the portfolio of one of its ASNs but that Congress did not like the idea. Like the other military branches, the Navy is limited by law to four assistant secretaries, three of whom must be an ASN for research, development and acquisition, an ASN for manpower and reserve affairs and one for financial management and comptroller. The fourth, an ASN for energy, installations and environment, is allowed by law but not prescribed.

Given the limitation to four ASNs, the Navy elected instead to create the special assistant, who will report directly to Modly and Spencer.

Modly has been acting as chief information officer for the Navy, a position with has been vacant for 20 months, to maintain “the elevation of the job.”

He said that his meetings with the Defense Department’s CIO and the CIOs of the other services convinced him of the need for the Navy to have an official to set

policy for information management, especially for cybersecurity. The CIO position exists in the law.

The new special assistant, who also will be the Navy's CIO, will not require confirmation by the Senate. The position will be co-located with the department's chief management officer and will be at an echelon just below the ASNs. Modly said it would be an "E-ring office" in the Pentagon.

The special assistant will oversee two four directors: chief technology officer, chief data officer, chief of digital strategy, and chief information security officer. In addition, two officials, the deputy chief of naval operations for information warfare and the Marine Corps' deputy commandant for information, will be dual-hatted as deputies to the special assistant.

"We are intending to bring in people from the private sector to help us in this particular office, so we're scouring both internally and externally to find the right types of people to bring in, particularly in the digital strategy area and the data strategy area," Modly said. "There's a lot more expertise outside this building that inside this building and we need to rely on the lessons learned in the private sector to do that."

He said that a couple of functions of the chief management officer that would migrate to the special assistant's portfolio, including chief data officer.

Modly said the new office would not involve adding a huge staff at the headquarters, just "moving pieces around the chessboard," and that he did not anticipate that additional funding would not be needed.

Coast Guard's Newest National Security Cutter Arrives in Hawaii

The crew of the U.S. Coast Guard Cutter Midgett cruises past Diamond Head on Oahu on Aug. 16. Midgett is the second national security cutter to be homeported in Hawaii after Cutter Kimball. U.S. Coast Guard/Petty Officer 3rd Class Matthew West

HONOLULU –

The U.S. Coast Guard Cutter Midgett (WMSL-757) arrived Aug. 16 at its new homeport in Honolulu, the Coast Guard Pacific Area said in a statement.

The Midgett is the eighth of the Coast Guard's national security cutters and the second to be homeported in Hawaii. Its sister ship, the Cutter

Kimball (WMSL-756) arrived on Dec. 22. Both cutters are scheduled to be commissioned Aug. 24 during a ceremony presided over by Coast Guard Commandant Adm. Karl Schultz.

“The U.S. Coast Guard has an enduring role in the Indo-Pacific Region, going back over 150 years, and our commitment today is as strong as ever,” Schultz said. “The national security cutters are the flagships of the fleet, and the homeporting of the Kimball and Midgett in Hawaii and their future deployments throughout the Indo-Pacific demonstrate the U.S. Coast Guard’s dedication to safeguarding the nation’s maritime safety, security and economic interests throughout the region.”

An Air Station Barbers Point HC-130 Hercules aircrew flies over the U.S. Coast Guard Cutters Midgett and Kimball off Oahu on Aug. 16. U.S. Coast Guard/Petty Officer 3rd Class Matthew West

Advanced command-and-control capabilities and an unmatched combination of range, speed and ability to operate in extreme weather enable national security cutters to deploy globally to confront national security threats, to strengthen maritime governance, to support economic prosperity and to promote individual sovereignty.

Known as

the Legend class, national security cutters are capable of executing the most challenging national security missions, including support to U.S. combatant commanders. They are 418 feet in length, 54 feet in beam and 4,600 long tons in displacement. They have a top speed of more than 28 knots, a range of 12,000 nautical miles, an endurance of up to 90 days and can hold a crew of up to 150.

These new cutters are replacing the high endurance Hamilton-class cutters (378 feet) that have been in service since the 1960s.

Kahu Dr. Kaleo Patterson blesses the Midgett after it sailed into its homeport of Honolulu for the first time on Aug. 16. U.S. Coast Guard/Chief Petty Officer Sherri Eng

While national security cutters possess advanced capabilities, more than 70% of the Coast Guard's offshore presence exists in the service's aging fleet of medium-endurance cutters. Many of these ships are more than 50 years old and are approaching the end of their service life. Replacing the fleet with new offshore patrol cutters is one of the Coast Guard's top priorities.

Midgett is named to honor all members of the Midgett family who served in the Coast Guard and its predecessor services. At least 10 members of the family earned high honors for their heroic lifesaving efforts. Among them, the Coast Guard awarded various family members seven gold lifesaving medals – the service's highest award for saving a life – and three silver lifesaving medals.

The Midgett's transit to Hawaii was punctuated by two

interdictions of suspected low-profile go-fast vessels in the Eastern Pacific Ocean, the first July 25 and a second July 31. The boardings resulted in a combined seizure of over 6,700 pounds of cocaine, estimated to be worth over $89 million.

Hawaii Welcomes Third Sentinel-Class Coast Guard Cutter

The William Hart, a 154-foot fast-response cutter, arrived in Hawaii to its new homeport on Aug. 17. U.S. Coast Guard
HONOLULU —
The Coast Guard Cutter William Hart (WPC-1134) arrived in Honolulu Harbor on
Aug. 17, becoming the third 154-foot fast-response cutter homeported in Hawaii,
the Coast Guard 14th District said in a release.

The FRCs
are some of the newest Coast Guard vessels to come online, replacing the aging
patrol boat fleet currently in use. The FRCs represent the Coast Guard's
commitment to modernizing service assets to address the increasingly complex
global maritime transportation system.

FRCs boast
advanced command, control, communications, computers, intelligence,
surveillance and reconnaissance systems designed to assist the

cutter’s crew
with their primary mission to patrol coastal regions.

Recently,
the FRCs already stationed in Honolulu participated in longer over-the-horizon
voyages to the Republic of the Marshall Islands and Samoa, displaying the
potential of these cutters and their importance to the Coast Guard’s overall
Pacific strategy and regional partnerships.

William
Hart, the cutter’s namesake, was a Gold Lifesaving Medal recipient who rescued
a crew member of the tug Thomas Tracy. In 1927, Hart dove into the water in a
70-mph gale off Absecon, New Jersey, to save the mariner, who went overboard in
the storm.

Throughout
the 1930s, Hart served in the Army Corps of Engineers before returning to the
Coast Guard in 1939, advancing to chief petty officer and serving as a
boatswain’s mate. Once the United States entered World War II, Hart was
commissioned as a lieutenant junior grade and served in both the Atlantic and
Pacific theaters. He retired from the Coast Guard in 1950.

William Hart is the last of the three FRCs to be stationed in Hawaii. The crew transited the vessel from Key West, Florida, following delivery and preparation for sailing. Three more are scheduled to be homeported in Guam, increasing the Coast Guard 14th District’s total number of FRCs to six.

The Coast Guard is acquiring a total of 56 FRCs to replace the 110-foot Island-class patrol boats. Coast Guard Sector Honolulu, to whom the cutter crew will report, plans to commission the William Hart in a ceremony Sept. 26.

Coast Guard Repatriates 25 Migrants to Dominican Republic

SAN JUAN,
Puerto Rico – The U.S. Coast Guard Cutter Legare (WMEC-912) repatriated 22
Dominicans and returned one Venezuelan and two Haitians to a Dominican navy
patrol vessel Aug. 15 near Samaná, Dominican Republic, the Coast Guard 7th
District said in a release.

The
repatriation followed the interdiction of an illegal migrant voyage Aug. 13 off
the coast of Aguada, Puerto Rico.

Seven
other Dominican migrants traveling in the group remain in federal custody
facing possible prosecution by the U.S. Attorney's Office for the District of
Puerto Rico on potential charges of attempted illegal reentry into a U.S.
territory.

The interdiction is the result of ongoing efforts in support of Operation Unified Resolve, Operation Caribbean Guard and the Caribbean Border Interagency Group (CBIG).

“The swift response by Puerto Rico Police Joint Forces of Rapid Action marine units and efficient collaboration with the crew of the cutter Legare allowed for the safe embarkation of the migrants, while the professionalism of our partners from the Dominican Republic navy ensured their safe and expedited return,” said Capt. Eric King, Sector San Juan commanding officer.

Coast Guard Sector San Juan Command Center watchstanders were contacted Aug. 13 by Puerto Rico Police. The watchstanders were told that two Police Joint Forces of Rapid Action (FURA) marine units had interdicted a 25-foot migrant boat about 3 nautical miles off the coast of Aguada.

Coast Guard watchstanders diverted the cutter Legare to the scene. Once there, Legare crew members safely embarked 29 Dominicans, 25 men and four women; 2 Haitian women; three Brazilian men; and a Venezuelan man.

Once aboard a Coast Guard cutter, all migrants receive food, water, shelter and basic medical attention.

The seven migrants facing prosecution are in custody of U.S. Border Patrol agents in Puerto Rico, while the three Brazilian migrants were transferred to Immigrations and Customs Enforcement–Homeland Security Investigations Special Agents for further immigrations processing.

Industry's Role in Force Projection, Sustainment a Topic at NDTA-USTRANSCOM Command Fall Meeting

Assistant Secretary of Defense for Sustainment Robert McMahon will discuss industry's role in projecting and sustaining U.S. forces during an emergency or a crisis at the National Defense Transportation Association-U.S. Transportation Command fall meeting Oct. 7-10 at Union Station in St. Louis.

As one of five keynote speakers, McMahon will discuss the private sector's role in providing augmented transportation capacity to support Defense Department requirements.

"Clearly, DoD cannot accomplish its mission without partnering with

commercial partners in the world of logistics and sustainment. They are absolutely essential to our success by ground, sea and air," said Michael P. Kleman, a spokesman for USTRANSCOM. "Our success is reliant on that partnership."

The collaboration's foundation rests on the Voluntary Intermodal Sealift Agreement and Civil Reserve Air Fleet programs, which provide commercial ships and aircraft, respectively, to meet mission needs.

For example, VISA involves the participation of all major U.S.-flag companies and offers access to more than 90 vessels, contributing more than 3 million square feet of force-projection capacity and 143,000 20-foot equivalent units (TEUs) of sustainment capability. On the other hand, CRAF includes 25 safety-certified U.S. air carriers, providing long-range international airlift for about 40% of DoD air cargo and more than 90% of passenger transport.

In addition, the Maritime Security Program, managed by the U.S. Maritime Administration, consists of 60 military-useful, internationally-trading, U.S.-flags ships that employ more than 2,500 U.S.-trained and credentialed mariners. MSP vessels are required to be enrolled in the VISA program.

After completing a 34-year Air Force career, retiring as a major

general in 2012, McMahon was CEO of the 21st Century Partnership and then served as the director of field operations and site lead for the Boeing C-17 Globemaster III Integrated Sustainment Program. He later served as president of Fickling Management Services of Macon, Georgia, from 2015 to 2017, leading a real estate company that maintained properties in eight states.

"I have a much greater appreciation of the private sector than I had when I wore the uniform. They are great Americans, just as dedicated and patriotic as those in uniform," McMahon said.

In his current position, McMahon works as the principal staff assistant and adviser to the undersecretary of defense for acquisition and sustainment, deputy secretary of defense, and secretary of defense for sustainment in the DoD. As the principal logistics official within DoD senior management, he also provides oversight of logistics policies, practices and efficiencies to enable readiness throughout the Pentagon as well as manages more than $170 billion in logistics operations.

McMahon also oversees the DoD's real property portfolio made up of 28 million acres, over 500 installations, and more than 500,000 buildings and structures valued at $1 trillion. Those interested in attending Mr. McMahon's keynote address and other fall Meeting activities can register here.

Newest National Security Cutter Makes Second Cocaine Seizure in Five Days as 4,600 Pounds Are Interdicted

Crew members from the Coast Guard Cutter Midgett sit atop a low-profile go-fast vessel interdicted by the crew July 31. The crew seized more than 4,600 pounds of cocaine from the suspected drug-smuggling vessel. U.S. Coast Guard

ALAMEDA, Calif. – Crews aboard the precommissioned U.S. Coast Guard Cutter Midgett (WMSL-757) interdicted a suspected low-profile go-fast vessel July 31 and seized more than 4,600 pounds of cocaine during a boarding in international waters of the eastern Pacific Ocean, the Coast Guard Pacific Area said in a release.

This was the second at-sea cocaine seizure made by Midgett's crew within five days.

Midgett's crew seized more than 2,100 pounds of cocaine July 25 from a low-profile go-fast boat, the cutter's first cocaine seizure ever since departing the Pascagoula, Mississippi, shipyard in June following acceptance by the Coast Guard.

The July 25 and July 31 boardings resulted in a combined seizure of more than 6,700 pounds of cocaine with an estimated street value of over $89 million.

Low-profile go-fast vessels are built by cartels for smuggling large quantities of contraband by riding low in the water to avoid detection. They are designed to be quickly sunk by using their integrated scuttling valves, a dangerous practice that jeopardizes the safety of smugglers and the Coast Guard boarding teams.

The cabin of a low-profile go-fast vessel interdicted by crew members from the Coast Guard Cutter Midgett on July 31. U.S. Coast Guard

Nearly 80% of all known illegal narcotics coming into North America are smuggled by international cartels through the eastern Pacific corridor, an area greater in size than the continental United States. The profits from cocaine manufacture allow drug cartels to diversify and fund other illicit trafficking activities such as the smuggling of opioids, synthetics, methamphetamines, people and weapons.

One metric ton of cocaine (2,204.6 pounds or 1,000,000 milligrams) is equal to 20 million individual doses upon arrival in the United States. The Coast Guard removed more than 2 million pounds (923 metric tons) of cocaine with an

uncut wholesale
value of more than $27 billion over the last five years.

“The
national security cutter gets you further, faster and delivers more capability
once on scene than any other cutter in the history of our service,” said Capt.
Alan McCabe, Midgett’s commanding officer. “I am incredibly proud of the crew’s
efforts who made these two seizures possible, and we are eager to conduct
future operations throughout the Pacific.”

Midgett, the Coast Guard’s
eighth national security cutter, is sailing toward its future homeport in
Honolulu, where it will be commissioned Aug. 24 along with its sister ship, the
Coast Guard Cutter Kimball (WMSL-756), in a ceremony presided over by Coast
Guard Commandant Adm. Karl Schultz.

Raytheon to Demo Unmanned Single-Sortie Mine Sweeping for Navy at ANTX 2019

An AQS-20C aboard an unmanned surface vehicle, which will be part of the single-sortie mine neutralization concept demonstration at ANTX 2019 the last week of August. The Raytheon Co.

ARLINGTON, Va. — The Raytheon Co. is ready to demonstrate a single-sortie mine neutralization concept using systems it developed or is developing. The technology will be demonstrated at Newport, Rhode Island, during the last week of August at ANTX (Advanced Naval Technology Exercise) 2019.

The Raytheon plan is to demonstrate "detect to engage" sea mines using unmanned systems, Andy Wilde, director of strategy and business development for Raytheon Undersea, said in an Aug. 15 interview with *Seapower*.

Wilde said that unmanned systems will "revolutionize" mine countermeasures (MCM) that currently take weeks or months to clear minefields and put minesweepers at risk. The Navy is developing an MCM mission package for the littoral combat ship (LCS) that will rely largely on unmanned systems.

https://www.youtube.com/watch?v=KF_46xNw5V0&feature=youtu.be
The concept for single-sortie mine neutralization is shown in this video. The Raytheon Co.

Raytheon will demonstrate its AQS-20C towed sonar, now in production, pulled through the water by a riverine craft acting as a surrogate for the Textron-built MCM unmanned surface vehicle (MCMUSV) that will be a component of the MCM mission package for the LCS.

Under the concept,

an MCMUSV is launched from an LCS and deploys the AQS-20C. Once a possible sea mine is detected by the AQS-20C's synthetic aperture sonar, a Barracuda expendable semi-autonomous mine neutralization unmanned undersea vehicle is – on the same pass – launched into the water from a A-size sonobuoy launcher on the MCMUSV.

The Barracuda deploys a float that serves as an RF datalink to the CUSV and an acoustic data link to the Barracuda. The tactical mission plan is downloaded from the LCS to the Barracuda via the CUSV. The Barracuda starts a search track and, once it acquires a mine, it maintains position at the mine. The operator on the LCS confirms the object is s mine and commands the Barracuda to detonate the mine with a charge. The MCMUSV would then continue its mission on its planned track.

Raytheon will have a time slot during ANTX 2019 in Narragansett Bay to run its MCM system through several geometric patterns, Wilde said.

He said his company is looking to take advantage of artificial and machine learning to optimize the performance of its systems.

He also said the MCM mission concept could be expanded to other missions, including by use of a B-size sonobuoy launcher with other payloads.

The AQS-20C sonar is now in production. Raytheon currently is developing the Engineering Development Models of the Barracuda and recently completed the Navy’s Preliminary Design Review.