Virtual Laboratory on Ship Demonstrates the Capabilities of Virtualized Systems at Sea

The VLOS, located in USS Lassen's sonar equipment room throughout the 2019 exercise, consists of five commercial off the shelf workstations and two processors. APPLIED RESEARCH LABORATORY – UNIVERSITY OF TEXAS

WASHINGTON –

Sailors aboard Arleigh Burke-class destroyer USS Lassen (DDG 82), in partnership with Program Executive Office Integrated Warfare Systems (PEO IWS) 5.0, Undersea Systems, successfully tested the Virtual Laboratory on Ship (VLOS), a virtualized Undersea Warfare Combat System (AN/SQQ-89 A(V)15), during a recent weeklong underway period, the PEO announced in a June 26 release. VLOS represents another important step forward in the U.S. Navy's efforts to speed combat system element development and software upgrades.

During the past year, IWS 5.0 developed VLOS in close collaboration with Applied Research Laboratory – University of Texas (ARL-UT) and Naval Undersea Warfare Center (NUWC) Division Newport to meet the Department of the Navy's demand to speed the development of cutting-edge weapon systems with industry's advancements in software virtualization and virtual machine applications. VLOS is a virtualized

sonar sensor subset of the tactical AN/SQQ-89A(V)15 system and operates alongside the ship's AN/SQQ-89 system via passive receipt of acoustic and navigation data from the tactical system. For rapid installation and removal purposes, VLOS is packaged and installed as a roll-on/roll-off temporary change to the ship it is installed aboard and incorporates the Naval Sea Systems Command flexible technology demonstration processes.

The VLOS was installed on board USS Lassen alongside the existing AN/SQQ-89A(V)15 tactical system to evaluate new advanced sensor capabilities in an operationally relevant environment against live submarine targets and weapons. During the weeklong underway period, PEO IWS 5.0, ARL-UT and NUWC engineers demonstrated the ability to transmit a software fix from a shore site to a ship at sea using VLOS. The successful transmission of software supports the Navy's initiatives to speed the delivery of new software capabilities to combat systems at sea via the existing networks ships use to send and receive data.

Additionally, VLOS operated the latest Advanced Capability Build (ACB) software, ACB 15, while the ship's AN/SQQ-89A(V)15 system operated its older certified software build, ACB 9. The ship's Sailors performed the undersea warfare exercise with

ACB 9 while the VLOS engineers were utilizing ACB 15, which allowed Sailors to see what additional combat capability exists within ACB 15 while performing high-end undersea warfare events.

“This progression of virtualizing the SQQ-89 system represents the team’s efforts to rapidly plan and execute demonstrations to take advantage of existing industry technology and align it with Navy technology,” said PEO IWS 5.0 Major Program Manager Capt. Jill Cesari. “These efforts will make a real difference in our ability to deliver more capability faster.”

In 2018, PEO IWS 5.0 tested VLOS on USS Nitze (DDG 94). During the Nitze trials, VLOS was tested pier side and at sea over a two-week period. The test results demonstrated satisfactory performance of a virtualized version of the tactical AN/SQQ-89A(V)15 advanced capability build software, operating in a relevant at-sea environment, and supported the decision to proceed with the most recent underway period on USS Lassen.

The VLOS test results will be used to evaluate advanced AN/SQQ-89A(V)15 sensor capabilities prior to fielding, demonstrate the feasibility of transmitting large and complex software upgrades and fixes for ships at sea, and support future efforts to virtualize the tactical AN/SQQ-89A(V)15 system.

Additionally, VLOS efforts have assisted the progression of virtualized training systems at the Fleet Anti-Submarine Warfare Training Center in San Diego, where the majority of training occurs for shipboard officers and Sailors operating and maintaining the AN/SQQ-89(A)V15 sonar suite.

LCS Indianapolis Completes Acceptance Trials

LCS 17, the future USS Indianapolis, during Acceptance Trials in Lake Michigan on June 19, 2019. LCS TEAM FREEDOM

MARINETTE, Wis. – Littoral Combat Ship (LCS) 17, the future USS Indianapolis, completed acceptance trials in Lake Michigan, Lockheed Martin said in a June 26 release. This is the ship's final significant milestone before the ship is delivered to the U.S. Navy. LCS 17 is the ninth Freedom-variant LCS designed and built by the Lockheed Martin-led industry team and is slated for delivery to the Navy this year.

"LCS 17 is joining the second-largest class of ships in the U.S. Navy fleet, and we are proud to get the newest Littoral Combat Ship one step closer

to delivery," said Joe DePietro, Lockheed Martin vice president and general manager, Small Combatants and Ship Systems. "This ship is lethal and flexible, and we are confident that she will capably serve critical U.S. Navy missions today and in future."

Unique among combat ships, LCS is designed to complete close-to-shore missions and is a growing and relevant part of the Navy's fleet.

- It is flexible – with 40 percent of the hull easily reconfigurable, LCS can be modified to integrate capabilities including over-the-horizon missiles, advanced electronic warfare systems and decoys.

- It is fast – capable of speeds in excess of 40 knots.

- It is lethal – standard equipped with Rolling Airframe Missiles (RAM) and a Mark 110 gun, capable of firing 220 rounds per minute.

- It is automated – with the most efficient staffing of any combat ship.

The trials included a full-power run, maneuverability testing, and surface and air detect-to-engage demonstrations of the ship's combat system. Major systems and features were demonstrated, including aviation support, small boat launch

handling, and recovery and machinery control and automation.

“I am extremely proud of our LCS team including our shipbuilders at Fincantieri Marinette Marine,” said Jan Allman, Fincantieri Marinette Marine president and CEO. “These are complex vessels, and it takes a strong team effort to design, build and test these American warships.”

Future LCS USS Cincinnati Delivered to Navy

LCS 20’s sponsor Penny Pritzker, former Commerce secretary, christens the future USS Cincinnati last May. U.S. Navy via Austal USA

MOBILE, Ala. – Austal USA delivered its 10th Independence-variant littoral combat ship to the U.S. Navy, the company announced in a release, as the future USS Cincinnati(LCS 20) will be the 18th LCS to enter the fleet.

“It’s so exciting to deliver another great warship to the U.S. Navy,” Austal USA President Craig Perciavalle said. “I’m so proud of our incredible team here at Austal USA, our industry and Navy partners for achieving this major milestone for the future USS Cincinnati.”

Five small surface combatants are presently under various

stages of construction at Austal's Alabama shipyard. The future USS Kansas City (LCS 22) is preparing for sea trials. Assembly is underway on the future USS Oakland (LCS 24) and the future USS Mobile (LCS 26), and modules are under construction for the future USS Savannah (LCS 28) and the future USS Canberra (LCS 30) with four more under contract through LCS 38.

"The shipbuilding momentum here is second to none, led by the most talented shipbuilding professionals I've ever worked with," Perciavalle said. "This momentum and efficiency continue to result in incredible cost savings ship over ship, enabling us to provide highly capable but very cost-effective solutions to our Navy."

> *"It's so exciting to deliver another great warship to the U.S. Navy."*
>
> *Austal USA President Craig Perciavalle*

More than 700 suppliers in 40 states contribute to the Independence-variant LCS program. This supplier base supports tens of thousands of small business to large business jobs.

LCS is a highly maneuverable, lethal and adaptable ship designed to support focused mine countermeasures, anti-submarine warfare and surface warfare missions. The Independence-variant LCS integrates new technology and capability to support current and future mission capability from deep water to the littorals.

Austal is also under contract to build 14 Expeditionary Fast Transport vessels (EPF) for the Navy. The company has delivered 10 EPFs while an additional two are in various stages of construction.

Marine Corps Awards BAE Team Contract to Develop ACV Family of Vehicles

Marines from the Amphibious Combat Vehicle new equipment training team complete an operator course in the vehicle. BAE and Iveco Defence Vehicles will team to produce the ACV Family of Vehicles. U.S. Marine Corps/Ashley Calingo

STAFFORD, Va. – BAE Systems along with teammate Iveco Defence Vehicles has been awarded a $67 million contract modification by the U.S. Marine Corps to develop new variants for the Amphibious Combat Vehicle (ACV) Family of Vehicles, BAE announced in a release.

"The ACV has proven to be a versatile platform capable of numerous configurations to meet current and future mission requirements," said John Swift, director of amphibious programs at BAE. "With this award, BAE Systems will be able to develop a family of vehicles that will deliver the technology and capability the Marines require to accomplish their mission in support of our national security."

The contract calls for the design and development of command (ACV-C) and 30 mm medium caliber cannon (ACV-30) variants. The ACV-C variant incorporates seven workstations to provide situational awareness and control of the battle space. The ACV-30 integrates a 30 mm cannon to provide the lethality and protection Marines need while leaving ample room for troop capacity and payload.

BAE Systems was previously awarded a low-rate initial production contract last June 2018 for the personnel variant (ACV-P). The Marine Corps announced the ACV had successfully completed anticipated requirements testing and would no longer be pursuing an envisioned incremental ACV 1.1 and ACV 1.2 development approach. The program is now known as the ACV Family of Vehicles, which encompasses the breadth and depth of the vehicle's capabilities and multiple variants.

Mercury Systems Garners $16 Million in DRFM Jammer Orders from U.S. Navy

ANDOVER, Mass. – Mercury Systems Inc. has received an $16 million more

orders against its $152 million five-year agreement to deliver advanced Digital RF Memory (DRFM) jammers to the U.S. Navy, the company announced in a release.

The orders were received in the fourth quarter of the company's fiscal 2019 year and are expected to be delivered over the next several quarters.

> *#PressRelease: Mercury Systems Receives $16M in DRFM Jammer Orders from @USNavyhttps://t.co/SmmTwONNCC*
>
> *— Mercury Systems (@MRCY) June 24, 2019*

Mercury DRFM jammers are size-, weight- and power-optimized to meet the requirements of airborne pod-based solutions and incorporate decades of DRFM technology development, validated electronic attack techniques and custom RF components.

"Our design and manufacturing teams remain committed to meeting the growing demands for mission-critical components for the U.S. military's electronic warfare (EW) test and training program," said Brian Perry, president of Mercury Defense Systems.

"In addition to satisfying current requirements for DRFM technology, Mercury is focused on developing the innovative solutions essential for the next

generation of
advanced DRFM capabilities to address broader system requirements and a more
complex [electronic warfare] concept of operations.”

Coast Guard Cutter Mohawk Returns After 90-Day Eastern Pacific Patrol

Petty Officer 3rd Class Ricky Ogborn helps free an entangled sea turtle in the eastern Pacific Ocean on June 3 during the Coast Guard Cutter Mohawk’s just-concluded 90-day patrol. U.S. Coast Guard

KEY WEST,
Fla. — The crew of the Coast Guard Cutter Mohawk (WMEC-913) returned to their
homeport in Key West following a 90-day counter-smuggling patrol in support of
Joint Interagency Task Force-South and operations in the Eastern Pacific Ocean,
the Coast Guard 7th District said in a release.

The Mohawk
crew, along with Coast Guard crews from Tactical Law Enforcement Team-South,
Coast Guard Helicopter Interdiction Tactical Squadron and multiple partner
agencies, interdicted more than 16,500 pounds of cocaine and more than 1,500
pounds of marijuana to counter and disrupt the illegal smuggling operations of

transnational criminal organizations.

Cutter Mohawk patrols the eastern Pacific Ocean in May. U.S. Coast Guard

The cutter crew also conducted joint operations with crews from the Costa Rica Servicio Nacional de Guardacostas, in which they assisted in the rescue of four Costa Rican mariners. The Mohawk crew also rescued four sea turtles entangled in fishing gear.

The Coast Guard increased U.S. and allied presence in the Eastern Pacific Ocean and Caribbean Basin, which are known drug transit zones off Central and South America. During at-sea interdictions in international waters, a suspect vessel is initially located and tracked by allied, military or law-enforcement personnel coordinated by JIAFT-S. The interdictions, including the actual boarding, are led and conducted by U.S. Coast Guardsmen. The law-enforcement phase of counter-smuggling operations in the Eastern Pacific is conducted under the authority of the Coast Guard 11th District headquartered in Alameda, California.

The cutter Mohawk is a 270-foot medium-endurance cutter, whose missions include search and rescue, maritime safety and security, and maritime law enforcement operations, such as

illegal migrant and drug interdiction operations.

Coast Guard Cutter Dependable Returns to Homeport After 62-Day Patrol

PORTSMOUTH, Va. — The crew of Coast Guard Cutter Dependable returned on June 22 to Little Creek, Virginia, after completing a 62-day Mid-Atlantic fisheries patrol, the Coast Guard 5th District said in a release.

From New Jersey to South Carolina, the Dependable's boarding teams conducted 39 boardings and inspected the catch, gear and lifesaving equipment of U.S. fishing vessels to ensure they met all required federal laws and regulations.

During the patrol, the Dependable's boarding team members identified a variety of lifesaving equipment concerns on board several commercial and recreational fishing vessels. The boarding team members helped those mariners fix their issues on the spot and educated them on the importance of maintaining their equipment.

“Living marine resource patrols are vital to ensuring the continued stability of the multibillion-dollar U.S. seafood industry as well as the stewardship and sustainability of living marine resources, such as fish, turtles and marine protected species,” said Cmdr. Rula Deisher, commanding officer of Coast Guard Cutter Dependable.

“Our boarding team members ensured that the mariners’ safety and fishing gear were fully operational and that they were operating within U.S. fishing regulations. We enjoyed the opportunity to serve the public so close to our homeport.”

The Dependable is a 210-foot medium-endurance cutter homeported in Little Creek and routinely deploys in support of counter-drug and alien migrant interdiction, living marine resources and search-and-rescue missions.

Coast Guard Cutter Vigilant Crew Returns Home After Caribbean Patrol

A Coast Guard Cutter Robert Yered small boat crew gives life

jackets to 50 migrants about 46 miles north of Cap Haïtien, Haiti, on May 20. The Coast Guard Cutter Vigilant crew transferred the migrants back to their country of origin. U.S. Coast Guard

CAPE CANAVERAL, Fla. – The crew of the Coast Guard Cutter Vigilant returned home June 23 to Cape Canaveral after a two-month Caribbean patrol, the Coast Guard 7th District said in a release.

The crew's patrol focused on enforcing U.S. federal laws by conducting boardings of U.S. and international vessels throughout the Caribbean basin while working with other government agencies and international partners to maintain national security.

While on patrol, the crew ensured the safe return of 50 Haitian migrants to their home country after their illegal and dangerous voyage was disrupted by the crew of the Coast Guard Cutter Robert Yered, a fast-response cutter homeported in Miami. The crew was also involved in a search for a person reported to be in the water after falling overboard from his sailing vessel.

The Vigilant crew interdicted a go-fast vessel illegally smuggling 7,800 pounds of garlic from Haiti to the Dominican Republic. Garlic smuggling is a global issue on the rise and has had negative impacts on the agricultural industry in the Dominican Republic in the last few years.

Upon hearing of the interdiction, the Dominican navy sent a ship to meet the Vigilant to take over the case for the prosecution. The contraband was valued at about $30,000 and was the largest Coast Guard seizure of its kind.

During their 59-day patrol, the crew worked with agencies such as the Jamaican Defense Force, Royal Bahamian Defense Force, Dominican navy, U.S. Drug Enforcement Agency and the U.S. Navy.

The Vigilant is a multimission 210-foot medium-endurance cutter whose missions include illegal drug and migrant interdiction as well as search and rescue. The Vigilant patrols throughout the Caribbean basin and Atlantic seaboard to ensure safety of life at sea and enforce international and domestic laws.

Marine Corps Awards Lightweight Body Armor Insert Contract to Point Blank Enterprises

POMPANO BEACH, Fla. – Point Blank Enterprises Inc. has been awarded a

$215.9 million
body armor contract by the Marine Corps Systems Command, the company announced
in a June 24 release.

The Marine
Corps Low Intensity Threat Environment (LITE) body armor insert is a new small-arms
protective insert that is designed to improve the survivability and mobility of
Marines by maximizing ballistic protection at a reduced weight.

“Reducing
Marine burden by providing innovative and lightweight armor solutions along
with our high-quality manufacturing capabilities is our expertise,” said Brian
Kopan, Point Blank’s senior vice president of engineering and technology. “Whether
we are designing armor systems for vehicles or individual protection equipment,
our mission is always focused on saving the life of those that protect us.”

For more than 43 years,
Point Blank Enterprises has provided products and designs engineered to
maximize ballistic protection. Point Blank has shipped body armor solutions to U.S.
servicemen and women, law enforcement, corrections officers, federal agents and
other national and international customers.

Navy Secretary Names Newest Towing, Salvage and Rescue Ship Cherokee Nation

An artist rendering of the future USNS Cherokee Nation (T-ATS 7). U.S. Navy/Mass Communication Specialist 1st Class Paul L. Archer

WASHINGTON — Navy Secretary Richard V. Spencer has announced the newest towing, salvage and rescue ship will be named Cherokee Nation in honor of the service and contributions the Cherokee people have made to the U.S. Navy and Marine Corps, the secretary's public affairs office said in a June 21 release.

"It is my privilege to announce that the many Cherokee Nation citizens who've served throughout the years will be remembered with the highest honor a secretary of the Navy can bestow, the naming of a ship," Spencer said.

This is the fifth U.S. ship to be named in honor of the Cherokee people.

"The Cherokee Nation is extremely honored that the U.S. Navy is recognizing our tribal nation and the generations of Cherokee men and women who have bravely and humbly sacrificed for our freedom today," Cherokee Nation Principal Chief Bill John Baker said.

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“Our Cherokee people have contributed in every major battle and war ever fought in this country and continue to serve in the armed forces in some of the highest rates per ethnicity. Cherokees are a strong, resilient people, and we are privileged to have a U.S. ship at sea that reflects both our country and tribe’s history and values.”

Gulf Island Shipyards was awarded a $64.8 million contract option for the detail design and construction of the new Ship, which will be based on existing commercial towing offshore vessel designs and will replace the current T-ATF 166 and T-ARS 50 class ships in service with the U.S. Military Sealift Command.
The Cherokee Nation is the second ship in the new class of towing, salvage and rescue ships and will be designated T-ATS 7.

The contract includes options for potentially six additional vessels, and each additional ship will be named in honor of prominent Native Americans or Native American tribes.

The T-ATS

will serve as open ocean towing vessels and will additionally support salvage operations and submarine rescue missions. The ship will be
built at the company’s shipyard in Houma, Louisiana, and is expected to be
completed in July 2021.