Moran: China Way Ahead of US on AI Data

Retired U.S. Navy Adm. William Moran, then vice chief of naval operations, visits Aircraft Intermediate Maintenance Detachment Iwakuni at Marine Corps Air Station Iwakuni, Japan, Sept. 12, 2018. *U.S. MARINE CORPS / Lance Cpl. Stephen Campbell*

ARLINGTON, Va. — The United States still has an edge in two aspects of artificial intelligence (AI), but the People's Republic of China is ahead on a third aspect and rapidly closing on the other two, a retired Navy admiral said.

Speaking on AI in a Nov. 16 webinar — hosted by the Navy League of the United States and sponsored by Deloitte — was retired Adm. William Moran, former vice chief of naval operations and currently a strategic advisor for several companies, a board member at the US Naval Institute and as the founder and president of WFM Advisors LLC.

Moran considered three legs of AI in his assessment: quality of data; AI expertise; and domain expertise.

“You add those things together and that’s where the magic happens,” he said.

The admiral said that much available data has to be refined, a time-consuming task that requires a large investment in personnel to convert stove-piped data in stove-piped systems to be useful across networks.

The United States – inside the U.S. Navy and outside – is flush with AI expertise, Moran said.

“We ae the best in the world in developing algorithms and developing AI capability,” he said.

But even more so, the Navy is vastly endowed with domain expertise.

“From a DoD [Department of Defense] perspective, we are so far ahead of the Chinese, in my opinion,” he said. “ASW [anti-submarine warfare], ASUW [anti-surface warfare], even – to some extent – cyber, we’re way ahead on domain expertise.

Moran said that on the aspect of data, “China is way ahead of us, because they can put raw manpower and unlimited resources towards data and they’ve done that for quite some time … and they don’t have a lot of the roadblocks to obtaining that data, not worried about the security pieces that we rightfully have in front of mind, whether it’s on the operational or tactical edge or the operational management structure.”

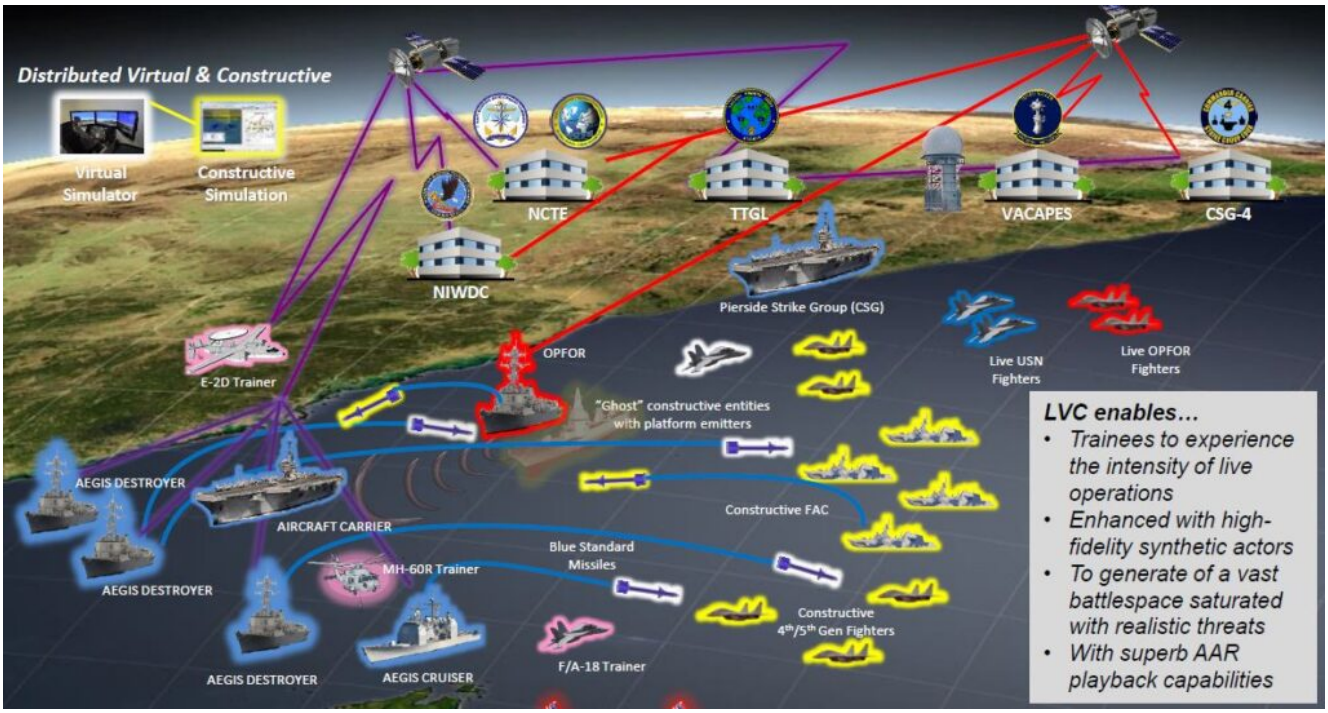
He said that China is going to close gaps quickly in AI and domain expertise.

“They’re in a race to get there sooner than we do,” he said.

“You’ve got to get the domain folks in with the software engineers that are writing the code, with the data that’s high

quality, and it can happen pretty quickly. … You just have to commit and get after it.”

Naval Surface Warfare Center Implements Navy Continuous Training Environment Tool for Live Virtual Constructive Training



The Navy Continuous Training Environment (NCTE) enables live virtual constructive (LVC) training with live and synthetic systems around the globe. The Navy recently utilized NCTE during the Large-Scale Exercise 2021 to execute LVC events with forces from across the United States Fleet Forces Command, U.S. Pacific Fleet and U.S. Naval Forces Europe-Africa. The above graph show how the program communicates using networks, simulations, simulation routing equipment,

data translation devices and live training range systems used to create a realistic LVC training environment. *RON KETER*
To meet the goal of digital transformation that seeks to eliminate onboard technical assists to ships by 2030 and advance the Navy's training capabilities, Naval Surface Warfare Center, Port Hueneme Division has connected to the Navy Continuous Training Environment (NCTE).

Connectivity with NCTE enables warfighters to conduct live virtual constructive (LVC) training with live and synthetic systems around the globe. NSWC Corona Division in Corona, California, develops, manages, operates and maintains the NCTE on behalf of Commander, U.S. Fleet Forces Command and Commander, Pacific Fleet.

The NCTE consists of networks, simulations, simulation routing equipment, data translation devices and live training range systems used together to create a realistic LVC training environment.

"The ability to properly train or conduct training on a simulated threat that has the actual capability of the real threat, provides us with some knowledge of what our weapons can and cannot do," said William Gieri, NSWC PHD Surface Warfare Engineering Facility (SWEF) manager. "It also provides training to fleet operations on what its people can expect in terms of how our systems would react to various threats."

NCTE enables sailors to experience an integrated and secure training environment that can generate a variety of situations that might not be available in a live exercise but should be expected at sea, including scenarios with multiple ships and aircraft, according to Gieri.

"Instead of having real-life aircraft like commercial airlines, we can put simulated aircraft up there flying commercial routes and also aircraft from hostile countries that gives operators on the ship a much more realistic threat

environment they're more likely to encounter in various areas of the world they couldn't otherwise experience in a sterile fleet environment or in an ocean where they don't have aircraft routes," Gieri said.

Gieri said he saw the tremendous potential to improve the command's capabilities by connecting to NCTE. While NCTE was developed specifically for conducting fleet training, the command is exploring options to support events such as Combat Systems Ship Qualification Trials (CSSQT) and Combat System Assessment Team (CSAT) events using the NCTE capability.

"With the CSSQT events that we conduct, we can't always provide real-world threats to the ships conducting them, so we are exploring using the NCTE and its capabilities to augment physical targets that we throw at the ships," Gieri said.

Recently, USS Fitzgerald (DDG 62) was the first ship to visit NSWC PHD that participated in the Single Ship Synthetic Training, using NCTE to develop and deliver a complex scenario of multiple anti-ship cruise missile vignettes to help DDG 62's training requirements.

And, the Navy recently used NCTE during the Large-Scale Exercise (LSE) 2021 to execute LVC events with forces from across the United States Fleet Forces Command, U.S. Pacific Fleet, and U.S. Naval Forces Europe-Africa. LSE 2021 was a globally integrated exercise that spanned multiple fleets across 17 different time zones connected using NCTE – executing new warfighting concepts and technology.

NSWC PHD's use of NCTE is in the early stages, according to Gieri, and the team is learning what its full potential is and the different ways it can be used in training the warfighter and supporting the fleet.

"If you do the crawl, walk and run phase, you can throw simple threats at somebody, and once they become proficient at simple threats, you can throw more complex scenarios at them – much

like you'd expect in the real world," Gieri said. "So, it gives them the ability to learn from past experiences and become more proficient than if they were in an actual hostile engagement."

In addition to providing enhanced training, NCTE is a cost-effective way to conduct complex training scenarios.

Sailors can also learn, while in a LVC training environment, how to tell the difference between a threat and a non-threat, as well as see how current weapons and combat systems may react to a potential threat.

"You can also recreate past scenarios, with different combat system baselines, which NSWC PHD is working toward right now with virtual test beds in the SWEF, so you can have a crew sitting at a combat information center with a combat system it has on its ship and see what real ships are doing on the range and see how that crew would react," Gieri said.

Kanoko Esheim, NSWC PHD LVC lead, worked alongside Gieri to connect SWEF to NCTE.

"By coupling NCTE integrating architecture with the other digital transformation initiatives that are underway, the command is determined to activate a modernized capability to enhance the toolkit and workforce development activities," Esheim said.

Gieri added that his team is exploring different ways the Navy can use the NCTE.

"We are working toward that end right now," Gieri said. "We haven't gotten there yet, but that's the next generation, which is how to bring a land-based test site and marry it with a ship at sea to look at different combat systems and evaluate older or future combat systems with the combat systems on a ship on a training range."

While NCTE was developed primarily for fleet training purposes, NSWC PHD is also exploring options for using it to support CSATs and CSSQTs.

“We’re working on use cases [that outline the purpose and likely uses] and presenting them to Pacific Surface Fleet leadership to see if there’s any buy-in or if the leaders can support that,” Gieri said. “This first test with NCTE during a CSAT at the end of September will be a proof-of-concept to evaluate if NCTE can be used in a CSAT environment.”

Virginia-Class SSN New Jersey Christened at Newport News Shipbuilding

Ship’s sponsor Susan DiMarco christens pre-commissioning unit New Jersey (SSN 796) during ceremony on Saturday, Nov. 13, at Newport News Shipbuilding. Also pictured (left to right) are Cmdr. Carlos Otero, the ship’s prospective commanding officer; retired Navy Adm. Michael Mullen, former chairman of the Joint Chiefs of Staff and former chief of naval operations; and Jennifer Boykin, president of Newport News Shipbuilding division. *HUNTINGTON INGALLS INDUSTRIES*

NEWPORT NEWS, Va. – Huntington Ingalls Industries christened pre-commissioning unit New Jersey (SSN 796) Nov. 13 at the company’s Newport News Shipbuilding division, the company said in a release.

“The christening is a Navy and shipbuilder tradition that celebrates the hard work and dedication of the women and men who are building this magnificent submarine, readying her for the next phase of construction, which includes launch, testing, sea trials and delivery to the Navy,” said Jennifer Boykin, president of Newport News Shipbuilding. “We commemorate these American builders during a challenging time in our nation’s history.

“When New Jersey joins the Navy’s fleet, she will deliver firepower for freedom, taking with her the skill of her shipbuilders, the spirit of her sponsor, the courage of her commander and crew and the pride of her fellow New Jerseyans,” Boykin added. “These characteristics, united, forge a strong national defense that defines America.”

Susan DiMarco, a New Jersey resident, retired dentist and wife of former Secretary of Homeland Security Jeh Johnson, serves as the ship’s sponsor and performed the traditional honor of breaking a bottle of American sparkling wine across the submarine’s bow during the ceremony.

“As citizens today, we are more divided and disconnected from one another than at any time in our last 50 years, but the efforts that went into building New Jersey say otherwise,” DiMarco said. “In order to complete this great ship there must

have been vital partnership and purpose. As a country, we are cooperative, generous and tenacious, and we can work together on exceptional ideas."

The ceremony took place outside of Newport News Shipbuilding's Module Outfitting Facility and was attended by more than 1,800 guests, including Newport News Shipbuilding employees who are building New Jersey, members of the submarine's crew, Navy personnel and other government officials, including Jeh Johnson.

U.S. Rep. Bobby Scott, of Virginia, and U.S. Rep. Donald Norcross, of New Jersey, both delivered remarks. Other speakers included New Jersey Gov. Phil Murphy; Jay Stefany, acting assistant secretary of the Navy for research, development and acquisition; Vice Adm. Johnny Wolfe Jr., director of the Navy's strategic systems programs; and Kevin Graney, president of General Dynamics Electric Boat.

Ceremony participants included U.S. Rep. Elaine Luria, of Virginia; Capt. Andrew P. Johnson, commanding officer of Supervisor of Shipbuilding, Conversion and Repair, Newport News; and Cmdr. Carlos Otero, the ship's prospective commanding officer.

Retired U.S. Navy Adm. Michael Mullen, former chairman of the Joint Chiefs of Staff and former chief of naval operations, provided the keynote address.

"Today is a day of gratitude, especially to the 4,000 men and women whose hard work put New Jersey together," said Mullen, adding that the nation must prevail in an ideological battle against an adversary it has not seen before.

"The future USS New Jersey will be a critical – some say the most critical – arrow in our quiver," he said.

The company reached the pressure hull complete milestone in February, meaning all of the ship's hull sections were joined

to form a single, watertight unit. This was one of the last major milestones before the submarine was christened and floated off to a pier-side berth for additional outfitting and testing.

New Jersey is the 23rd Virginia-class submarine and the 11th to be delivered by Newport News Shipbuilding. It is first submarine designed with a modification for gender integration. Construction began in March 2016 and is 82% complete. The submarine is scheduled to be delivered to the U.S. Navy in late 2022.

A video of the ceremony, along with additional information on New Jersey, DiMarco and the Virginia-class submarine program, can be found at: https://nns.huntingtoningalls.com/SSN796

Navy to Christen Submarine New Jersey

USS Virginia, the first of the Virginia-class of fast-attack submarines, in 2004. The Navy will christen the newest Virginia-class submarine, the future USS New Jersey (SSN 796) on Saturday, Nov. 13. *GENERAL DYNAMICS ELECTRIC BOAT / Wikipedia*

ARLINGTON, Va. — The Navy will christen one of its newest Virginia-class fast-attack submarines, the future USS New Jersey (SSN 796), during an 11 a.m. EST ceremony Saturday, Nov. 13, 2021, at Huntington Ingalls Industries in Newport News, Virginia, the Defense Department said Nov. 12.

The principal speaker will be retired Adm. Michael Mullen, the 17th chairman of the Joint Chiefs of Staff and the 28th chief of naval operations. Frederick "Jay" Stefany, acting assistant secretary of the Navy for research, development and acquisition and Vice Adm. Johnny Wolfe Jr., director, Strategic Systems Programs, will also deliver remarks. The submarine's sponsor, Susan DiMarco Johnson, will christen the

ship by breaking a bottle of sparkling wine across the bow in a time-honored Navy tradition.

“Shipbuilding has always played a key role in shaping the future of our national security,” said Mullen. “The impressive community of men and women involved in the construction of the future USS New Jersey should be extremely proud as they continue a legacy of extraordinary USS New Jersey ships and the future of our maritime security.”

The future USS New Jersey (SSN 796) is the third Navy vessel named in recognition of the state and is the 5th Block IV Virginia-class submarine to be built. The first USS New Jersey (Battleship No. 16) commissioned in 1906 and then sailed as part of the around-the-world cruise of the Great White Fleet. It spent most of its career in the Atlantic and West Indies, decommissioning in 1920.

The second USS New Jersey (BB 62) was commissioned in early 1943 before sailing for the Pacific. It served as a fast carrier escort and shore bombardment platform in the war against Japan, earning nine battle stars through the end of World War II. Although decommissioned in the post-war drawdown, it returned to service three more times over the next 45 years: once for the Korean War, once for Vietnam and again for service in the 1980s at the end of the Cold War. New Jersey now serves as a museum ship in Camden, New Jersey.

Virginia-class submarines are built to operate in the world’s littoral and deep waters while conducting antisubmarine warfare, anti surface ship warfare, strike warfare, special operations forces support, intelligence, surveillance, and reconnaissance, irregular warfare and mine warfare missions. Their inherent stealth, endurance, mobility and firepower directly enable these submarines to support five of the six maritime strategy core capabilities: sea control, power projection, forward presence, maritime security and deterrence. Virginia-class submarines are replacing Los

Angeles-class fast-attack submarines as they retire.

Navy to Christen Future USNS Apalachicola

USNS Spearhead, the lead ship in the Spearhead class of expeditionary fast transport ships. *AUSTAL / Phil Beaufort*

ARLINGTON, Va. – The Navy will christen its 13th Spearhead-class expeditionary fast transport, the future USNS Apalachicola (T-EPF 13), during a 10:00 a.m. CT ceremony Saturday, Nov. 13 in Mobile, Alabama, the Defense Department said Nov. 12.

Brenda Ash, mayor of Apalachicola, Florida, will deliver the principal ceremonial address. Remarks will also be provided by

Vice Adm. Darse Crandall, judge advocate general of the Navy; Bilyana Anderson, deputy assistant secretary of the Navy for Ships; Steven Cade, executive director, Military Sealift Command; Rusty Murdaugh, president of Austal USA; and Stan Kordana, vice president of Surface Systems, General Dynamics Mission Systems. Former Georgia Sen. Kelly Loeffler, the ship's sponsor, will christen the ship by breaking a bottle of sparkling wine across the bow in a time-honored Navy tradition.

"This ship honors the city of Apalachicola, Florida, a city that represents America's fighting spirit and dedication to duty," said Secretary of the Navy Carlos Del Toro. "Apalachicola, like the other ships in the EPF class, will provide our warfighters the necessary high-speed sealift mobility and agility to accomplish any mission. I am thankful for this ship and its crew who will serve our nation for decades to come."

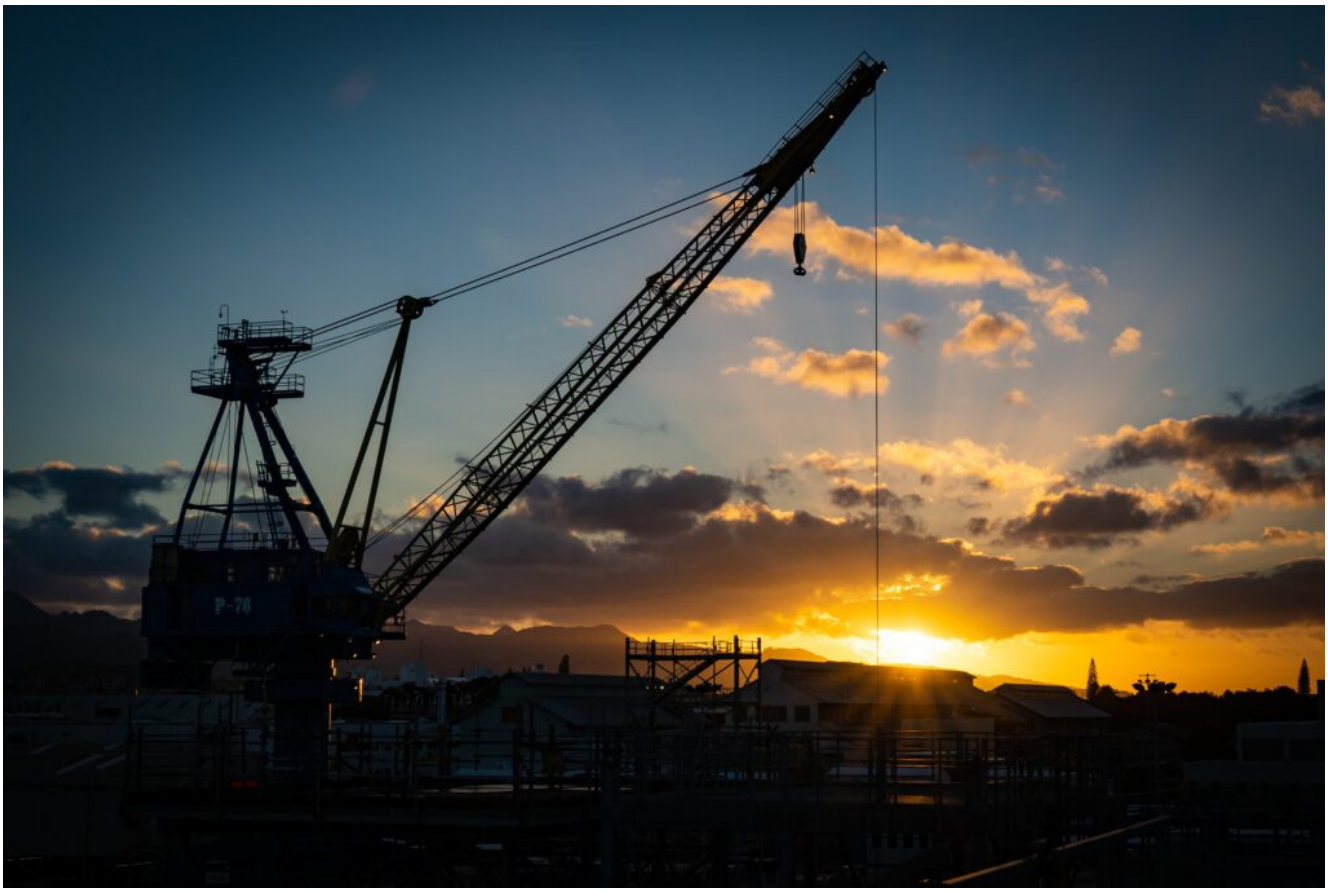
The future USNS Apalachicola is the 13th ship in its class and will be operated by the Navy's Military Sealift Command. The ship is named in honor of the city of Apalachicola and will be the second U.S. Navy ship to bear that name. The first Apalachicola (YTB 767) was a Natick-class large harbor tug launched in 1963. The tugboat spent the majority of its service in the Puget Sound-area providing harbor services to various ships. Apalachicola was stricken from the Navy List in 2002.

EPF class ships are designed to transport 600 short tons of military cargo 1,200 nautical miles at an average speed of 35 knots. The ship can operate in shallow-draft ports and waterways, interfacing with roll-on/roll-off discharge facilities and on/off-loading the Abrams main battle tank (M1A2).

The EPF includes a flight deck for helicopter operations and an off-load ramp that will allow vehicles to drive off the

ship quickly. EPF's shallow draft (less than 15 feet) further enhances littoral operations and port access. This makes the EPF an extremely flexible asset for support of a wide range of operations, including maneuver and sustainment, relief operations in small or damaged ports, flexible logistics support, or as the key enabler for rapid transport.

Navy Contracts 5 Companies to Compete for Future Possible Shipyard Modernization Projects



Pearl Harbor Naval Shipyard & IMF, (February 11, 2021) Sunrise over the Ko`olau Mountains with a portal crane P-76 in the

foreground at Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility. *U.S. NAVY / Public Affairs Specialist Dave Amodo*

WASHINGTON – Naval Facilities Engineering Systems Command awarded contracts to five companies to facilitate the award of future task orders for potential military construction projects at Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility (PHNSY & IMF) in Hawaii and Puget Sound Naval Shipyard (PSNS) & IMF in Washington, the command said in a release.

The five companies may compete for future task orders for pre-construction planning, preparation, and constructability reviews associated with construction of waterfront facilities such as warehouses, dry docks, piers, and other site improvements, as well as dredging and incidental design, environmental, and other services related to the Navy's Shipyard Infrastructure Optimization Program (SIOP).

"These contracts will help the Navy begin design and renovation work at Pearl Harbor Naval Shipyard and Puget Sound Naval Shipyard once we've completed all the regulatory processes, including agency and government-to-government consultations and public engagement," said Rear Adm. John Korka, NAVFAC's commander, and the Navy's chief of civil engineers. "It involves industry partners in our planning efforts, a lesson we learned from our SIOP efforts to date. This will facilitate healthy competition and, ultimately, help us deliver the best solution we can for our Navy and our Nation."

The contracts are for up to eight years or a combined cumulative value of $8 billion, whichever comes first. While the contracts are primarily for SIOP-related work at PHNSY and PSNS, task orders may also be issued for work at other sites in NAVFAC's areas of responsibility.

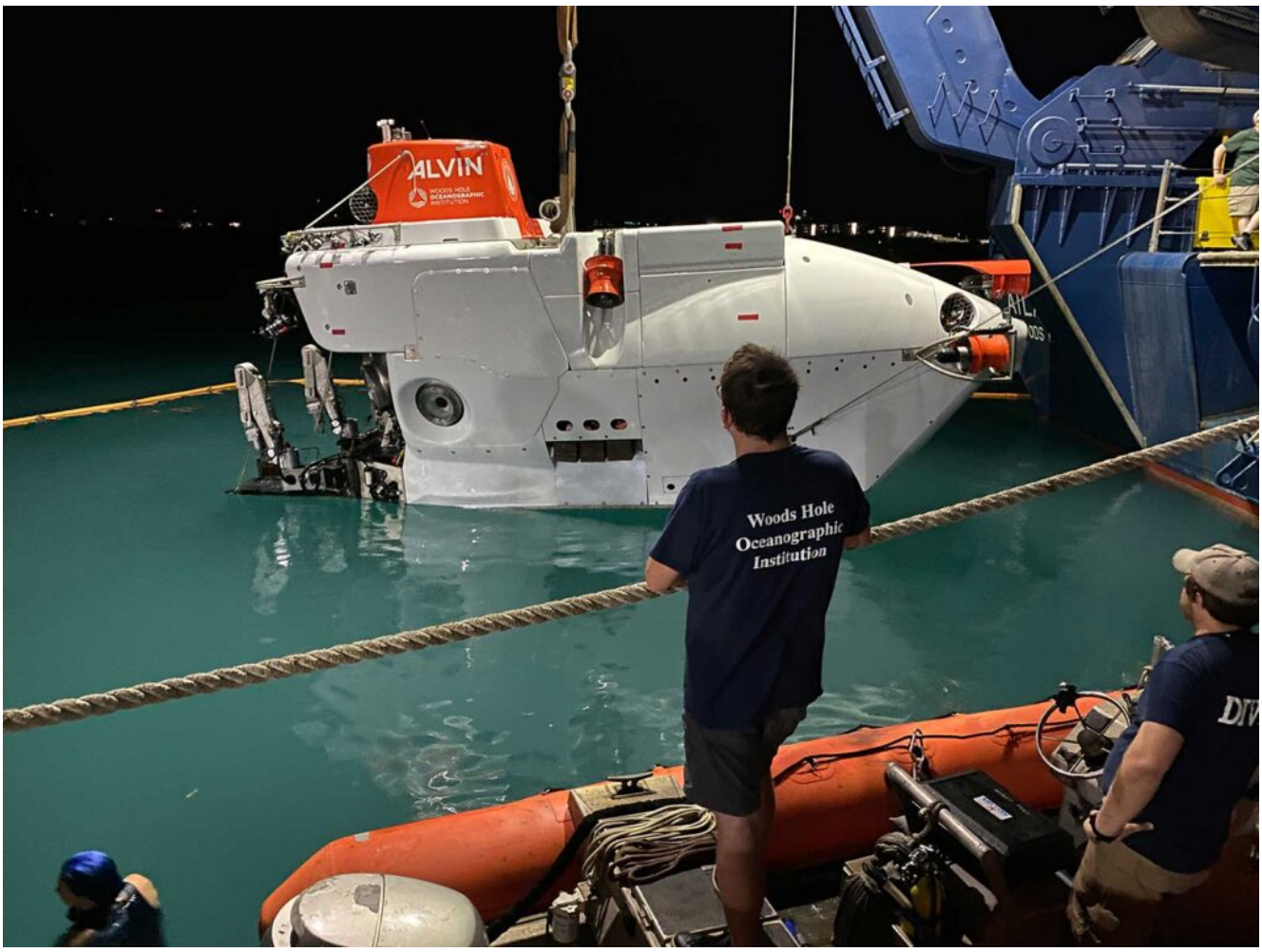
“The Navy depends on our shipyards returning combat-ready ships and submarines to the fleet,” said Korka. “SIOP guides the Navy’s investment plan to achieve that. It’s a once-in-a-century effort that the NAVFAC team is proud to be part of.”

SIOP is a joint effort between NAVFAC, Naval Sea Systems Command and Commander, Navy Installations Command to recapitalize and modernize the infrastructure at the Navy’s four public shipyards, including repairing and modernizing dry docks, recapitalizing and reconfiguring shipyard facilities, and modernizing the shipyards’ industrial plant equipment.

The awardees for this contract are Reston, Virginia-based Bechtel National; Honolulu, Hawaii-based Dragados/Hawaiian Dredging/Orion JV; Burlingame, California-based ECC Infrastructure; Vancouver, Washington-based SIOP MACC, AJV; and Sylmar, California-based TPC-NAN joint venture.

For more information about the Shipyard Infrastructure Optimization Program, visit https://www.navsea.navy.mil/Home/Shipyards/SIOP/.

Navy-Owned Deep-Diving Alvin Being Certified for Operations to 6,500 Meters



Alvin undergoing certification in Bermuda on Nov. 2. *WHOI / Ken Kostel*

The deep-diving Human Occupied Vehicle Alvin is being certified for return to service following completion of a series of modernization and improvements. Alvin is currently undergoing certification dives near Bermuda.

Thanks to Alvin's three-inch-thick titanium sphere, researchers can study the deep ocean while safe from the crushing pressure and deadly cold.

Alvin is owned by the U. S. Navy Office of Naval Research and operated by the National Deep Submergence Facility (NDSF) at Woods Hole Oceanographic Institution (WHOI) and was last certified in 2013 to dive to 4,500 meters. Although a $50 million overhaul was conducted between 2011 and 2013, some of the necessary improvements to certify the vehicle to conduct deeper dives were not yet available. An $8 million upgrade was commenced last year. Alvin's upgrade and operations are

largely funded by the National Science Foundation.

According to Andy Bowen, a principal engineer of applied ocean physics and engineering at WHOI and director of the NDSF, the most recent overhaul will extend Alvin's depth certification from 4,500 to 6,500 meters.

"This increase in depth capability involves a wide range of improvements from a new titanium personnel sphere, variable ballast system, hydraulic power plant and upgraded floatation," he said. "There has also been a myriad of improvements to the vehicle's propulsion system, imaging capabilities and overall electronic upgrades.

"We are engaged in the early stages of sea trials to verify performance of all the vehicle systems, including life support, stability, variable ballast, manipulation and hydraulic components," Bowen said. "Progress in verifying perforce has been steady with initial dives tethered to the support vessel RV Atlantis accomplished with satisfactory results. We expect to complete the first untethered dives this week in the harbor here in St. Georges, Bermuda. Once this has been accomplished, Atlantis and Alvin will move into open ocean and continue with a series of deeper dives until we have achieved our full depth of 6,500 meters."

Alvin will make its first 6,500-meter dive, or 21,325 feet – nearly four miles below the ocean's surface – in mid-November. It takes about three and a half hours to reach that depth. Missions can last as long as 10 hours, although most missions do not travel to the vehicle's maximum depth.

Atlantis completed its own one-year, $50 million overhaul in July.

"We planned to do the one-year refit of Atlantis to coincide with the work on Alvin, so the mothership and sub would be done in parallel," said Tim Schnoor, a contractor supporting ONR's research ship programs. "The work on Atlantis included

improvements to and recertification of Alvin's launch and recovery system, and the upgrades to the storage hangar where Alvin is kept between missions."

Brian Pelletier, assistant program manager for advanced undersea systems at Naval Sea Systems Command (NAVSEA), said the certification process will ensure Alvin can be operated safely with people on board. "We ensure the system is safe for manned operations per the manual for deep submergence systems. Our NAVSEA team has been observing the November test dives in the Bahamas, and engineers from Team SUB will provide independent representatives to make sure the tests are being performed in accordance with the requirements of NAVSEA P9290, which is the Navy's system certification procedures and criteria manual for deep submergence systems."

After the certification dives, Bowen said Alvin will move into a brief series of test dives to prove its scientific capabilities in the waters around Puerto Rico. "With these accomplished, Alvin's first scientific dives will be in support for Dr. Craig Young from the University of Oregon," he said.

Alvin usually operates with a pilot and carries two scientists, and can be fitted with the appropriate instruments and science payload for the mission being conducted.

ONR is responsible for acquisition and life cycle support, with funding also provided by the National Science Foundation and the National Oceanic and Atmospheric Administration. Alvin's operations are managed by the NDSF and scheduling is coordinated by the University-National Oceanographic Laboratory System.

In addition to Alvin, the NDSF also operates the Navy-owned remotely operated vehicle Jason and autonomous underwater vehicle Sentry for the ocean science community.

While researchers can learn a lot from unmanned systems, Bowen

said there is no substitute for the human. “Humans are still the most effective means for exploring the unknown,” he said.

Future USNS Harvey Milk Christened at General Dynamics NASSCO San Diego

Military Sealift Command’s newest ship, fleet replenishment oiler USNS Harvey Milk (T-AO 206), slides into the water during the christening ceremony at General Dynamic NASSCO, San Diego. The ship honors Navy veteran and LGBT activist Harvey Milk, one of the first openly gay candidates elected to public office as a member of the San Francisco Board of Supervisors in 1978. *U.S. NAVY*

SAN DIEGO – Fleet replenishment oiler USNS Harvey Milk (T-AO

206), the Military Sealift Command's newest ship, was christened during a ceremony at the General Dynamics NASSCO shipyard in San Diego, Nov. 7, Navy spokeswoman Sarah Burford said in a release.

The event was attended by the family of the ship's namesake as well as other dignitaries included Carlos Del Toro, secretary of the Navy; former Secretary of the Navy Ray Mabus; Vice Adm. Jeffery Hughes, deputy chief naval operations for Warfighting Development; Rear Adm. Stephen Barnett, commander, Navy Region Southwest; Rear Adm. Michael Wettlaufer, commander, Military Sealift Command; Capt. James White, Milk's civil service master; Todd Gloria, mayor, San Diego; former Rep. Susan Davis; Jen Campbell, San Diego Council president; Anne Kronenberg, activist and Milk's former campaign manager; members of the Harvey Milk Foundation, and members of the LGBTQ+ community.

The ship honors Navy veteran and LGBT activist Harvey Milk, one of the first openly gay candidates elected to public office as a member of the San Francisco Board of Supervisors in 1978. He was assassinated Nov. 10, 1978, 10 months after he was sworn in, by fellow City Supervisor Dan White. Milk was posthumously awarded the Presidential Medal of Freedom in 2009 for his activism. USNS Harvey Milk is the first ship named for an openly gay person.

"The secretary of the Navy needed to be here today, not just to amend the wrongs of the past, but to give inspiration to all of our LGBTQ community leaders who served in the Navy, in uniform today and in the civilian workforce as well too, and to tell them that we're committed to them in the future," Del Toro said, noting that Milk resigned his commission and was discharged from the Navy for being gay. "For far too long, sailors like Lt. j.g. Milk were forced into the shadows or, worse yet, forced out of our beloved Navy. That injustice is part of our Navy history, but so is the perseverance of all

who continue to serve in the face of injustice."

"My uncle never dreamed of having a ship, or a street, or a park, or a school named after him," said Stuart Milk, Harvey's nephew and the keynote speaker at the ceremony. "What we celebrate today is that the Navy honors the difference between tolerance and acceptance."

The 746-foot Milk is the second ship in the new John Lewis-class previously known as the TAO(X). This class of oilers has the ability to carry 162,000 barrels of diesel ship fuel, aviation fuel and dry stores cargo. The upgraded oiler is built with double hulls to protect against oil spills and strengthened cargo and ballast tanks, and will be equipped with a basic self-defense capability, including crew served weapons, degaussing, and Nixie Torpedo decoys, and has space, weight, and power reservations for close in weapon systems such as SeaRAMs and an antitorpedo torpedo defense system. The Lewis-class of oilers will replace the current Kaiser-class fleet replenishment oilers and they age out of the MSC fleet.

"A Navy veteran and tireless advocate for equality and universal rights, having Harvey Milk as the namesake for this ship as she adds to our nation's strategic advantage in agile logistics is absolutely awesome," said Wettlaufer. "With enhanced capabilities in storage and delivery of fuel and cargo, Harvey Milk will support our Navy in the away game as we keep our country safe far from home and protect the sea lines of communication. Important to our economic vitality and assuring allies and partners, this ship will help promote freedom of access to international seas and the rules based international order that has sustained the peace over the last 70 years."

Speaking before breaking a bottle of champagne across the ship's hull, the ship's sponsor, Paula Neira, clinical program

director of the Johns Hopkins Center for Transgender Health and a Navy veteran, said, “When Harvey Milk sails, she’ll send a message both domestically and around the globe to everybody that believes in justice and freedom and liberty, that there is a place for you in this family.”

Following the traditional champagne christening, Milk slid into the water with its horn blowing, streamers flying and music from the Navy Band Southwest playing.

Five more Lewis-class oilers are on order for the Navy. In July 2016, then-Secretary of the Navy Ray Mabus said he would name the Lewis-class oilers after prominent civil rights activists and leaders including Earl Warren, Sojourner Truth, Lucy Stone and Robert F. Kennedy.

Navy to Christen Future USNS Harvey Milk

A photo illustration announcing that Military Sealift Command fleet oiler, T-AO 206, will be named USNS Harvey Milk. *U.S. NAVY*

ARLINGTON, Va. — The Navy will christen the John Lewis-class replenishment oiler, the future USNS Harvey Milk (T-AO 206),

during a 9 a.m. PDT ceremony Saturday, Nov. 6, in San Diego, California, the Defense Department said Nov. 5.

Stuart Milk, cofounder of the Harvey Milk Foundation and Milk's nephew, will deliver the principal ceremonial address. Remarks will also be provided by the Carlos Del Toro, secretary of the Navy; Vice Adm. Jeffrey Hughes, deputy chief of naval operations for Warfighting Development; and Rear Adm. Michael Wettlaufer, commander, Military Sealift Command. The ship's sponsors are U.S. Sen. Dianne Feinstein of California, and Paula Neira, Navy veteran and clinical program director of the Johns Hopkins Center for Transgender Health. Neira will christen the ship by breaking a bottle of sparkling wine across the bow in a time-honored Navy tradition.

"Tomorrow we christen the future USNS Harvey Milk," said Del Toro. "Leaders like Harvey Milk taught us that diversity of backgrounds and experiences help contribute to the strength and resolve of our nation. There is no doubt that the future Sailors aboard this ship will be inspired by Milk's life and legacy."

The Navy's Military Sealift Command will operate the future USNS Harvey Milk, the second ship in its class. The ship is named in honor of the late politician and civil and human rights activist, who served in the Navy during the Korean War as a diving officer. After his naval career, Harvey Milk was elected to the San Francisco Board of Supervisors in 1977, becoming the first openly gay elected official in California. Milk was assassinated on Nov. 27, 1978.

The John Lewis-class ships are based on commercial design standards and will recapitalize the current T-AO 187-class fleet replenishment oilers to provide underway fuel replenishment to Navy ships at sea. Fleet replenishment oilers are part of the Navy's Combat Logistics Force.

In June 2016, the Navy awarded a $3.2 billion contract to

General Dynamics NASSCO in San Diego to design and construct the first six ships of the Future Fleet Replenishment Ship, the John Lewis-class (T-AO 205), with construction commencing in September 2018. The Navy plans to procure 20 ships of the new class.

Norfolk Naval Shipyard Returns USS Pasadena to the Fleet

USS Pasadena (SSN 752) returned to the fleet Oct. 31 following

successful completion of its Drydocking Selected Restricted Availability at Norfolk Naval Shipyard (NNSY). *NNSY / Tony Anderson*

NORFOLK NAVAL SHIPYARD, Portsmouth, Va. – USS Pasadena (SSN 752) returned to the fleet Oct. 31 following successful completion of its Drydocking Selected Restricted Availability (DSRA) at Norfolk Naval Shipyard (NNSY), said Michael Brayshaw, NNSY deputy public affairs officer for Norfolk Naval Shipyard.

The Los Angeles-class attack submarine spent just over a year at NNSY to replace, repair and overhaul components throughout the boat, as the shipyard's first DSRA in a decade.

Pasadena served as NNSY's pilot project leveraging the Naval Sustainment System–Shipyards (NSS-SY) program. NSS-SY is underway at all four public shipyards, leveraging industry and government best practices on shipyard processes to drive quick and visible improvements in ship maintenance. During the overhaul, Navy leaders such as then-Acting Secretary of the Navy Thomas Harker visited NNSY and met with the Pasadena team to pledge their support and discuss the drive to "get real, get better," encouraging shipyarders to candidly discuss any constraints so they can be resolved.

NSS-SY initiatives included establishing an Operations Control Center to drive project team communications and resolve barriers in work execution, and "crew boards" to track jobs supporting the boat's overhaul. Deputy Project Superintendent Mike Harrell was brought onto the project for standing up the center and was instrumental in breaking down barriers to ensure non-stop execution of the critical chain of work, driving through issues and constraints to completion. While Pasadena did not meet its original completion date, these improvements helped deliver the boat back to the Fleet and are being implemented on other NNSY overhauls, to include USS Toledo (SSN 769) and USS Dwight D. Eisenhower (CVN 69).

“Following a tremendous amount of effort and teaming on a very challenging availability, Pasadena has returned to the fleet to meet its significant operational commitment for our Navy and nation,” said Shipyard Commander Capt. Dianna Wolfson. “The Pasadena project team met our Navy leadership challenge to ‘get real, get better’ in several significant ways, and their efforts will pay off as we leverage their learning across America’s shipyard and our NAVSEA enterprise.”

Project Superintendent Frank Williams said the project team stayed focused throughout all phases of the availability on knowledge sharing and maintaining schedule. Beyond NSS-SY improvements, Pasadena’s team incorporated lessons learned from Portsmouth Naval Shipyard’s USS Newport News (SSN 750) DSRA in planning the availability and executing similar jobs. Additionally, when Pasadena missed its original undocking date in the spring, the project team worked to perform more jobs with the boat on keel blocks to condense the schedule following undocking.

“Sailors and ships are meant to be at sea and not in a repair environment and throughout all phases of the availability, it’s been our job to get them back there,” said Williams. “The project team has done a great job keeping focused on this throughout the past 13 months. Thanks to all the efforts of our team and Ship’s Force, we have now gotten Pasadena back to sea where she belongs.”