Navy Awards Orca XLUUV Contract to Boeing

ARLINGTON, Va. – The Navy has selected Boeing to build the Orca extra-large unmanned underwater vehicle (XLUUV).

With a $43 million contract modification, the Naval Sea Systems Command ordered four Orcas and associated support elements, a Feb. 13 Defense Department contract announcement said.

The Orca – named for the similar-size marine mammal – is the largest unmanned underwater vehicle currently planned for the Navy's operational use. It will not be submarine-launched but autonomously launched from the shore and independently deployed.

The open-architecture, reconfigurable Orca XLUUV "will be modular in construction with the core vehicle providing guidance and control, navigation, autonomy, situational awareness, core communications, power distribution, energy and power, propulsion and maneuvering, and mission sensors," the announcement said. "The Orca XLUUV will have well-defined interfaces for the potential of implementing cost-effective upgrades in future increments to leverage advances in technology and respond to threat changes."

The XLUUV will be equipped with a modular payload bay with interfaces for future payloads.

The Boeing design is based on the 51-foot-long Echo Voyager, a large autonomous UUV developed by the company as a capabilities demonstrator.

The Orca program is managed by the Program Executive Office – Unmanned and Small Combatants.

Mercury Systems Receives $3.5M Order for Rugged Servers for Naval Application

ANDOVER, Mass. – Mercury Systems Inc. has received a $3.5 million order from a leading defense prime contractor for rugged servers to be used in a naval subsurface application, the company announced in a Feb. 12 release. The order was booked in the Company's fiscal 2019 third quarter.

Mercury's EnterpriseSeries servers are currently deployed on over forty naval programs. Designed from the ground up for mission critical applications where interoperability, longevity, availability and performance are crucial, Mercury's servers feature commercial leading-edge technologies while providing superior resilience to shock, vibration and temperature extremes.

"We are proud to provide our customers with a wide variety of servers designed for suitability in a variety of military domains, in this case, the demanding environment of our Navy's subsurface fleet," said Scott Orton, vice president and general manager of Mercury's Trusted Mission Solutions group. "With a broad range of surface, subsurface, ground and airborne deployments, Mercury continues to develop and support server solutions that can be optimally configured to meet our customer's performance, reliability, environmental and security needs."

Department of the Navy Announces New Education Initiatives

WASHINGTON – The Department of the Navy (DoN) released its Education for Seapower report Feb. 12, along with the Secretary of the Navy's action memorandum, providing the way forward for the new education initiatives for the department, according to a release of the same date from the undersecretary of the Navy's public affairs officer.

The Education for Seapower study was a clean-sheet review of naval learning and focused on flagship institutions like the U.S. Naval Academy, Naval Postgraduate School, and Naval and Marine War Colleges, along with a fresh look at the relationships with civilian academic institutions and corporate learning structures.

Members of the Education for Seapower Executive Board included luminaries such as Adm. Mike Mullen, USN(Ret.), Gen John Allen, USMC(Ret.), Amb. Barbara Barrett, Vice Adm. Ann Rondeau, USN(Ret.), and Dr. Harlan Ullman.

"I am convinced, now more than ever before that the intellectual development of our naval leaders is the most critical warfighting capability for our national security," said the Navy Secretary Richard V. Spencer. "That is why the Department of the Navy intends to create a Naval University System that further integrates and aligns naval education to the need of the enterprise."

Highlights from the memorandum include a new secretary of the Navy staff assistant, Chief Learning Officer for naval education, intent to establish a Naval Community College with universal transcripts so enlisted Sailors and Marines can soon earn accredited associate's degrees in technology-rich fields,

and a new Naval University System that retains the strengths of current educational institutions, while aligning strategic intent in order to provide increased agility. While the Department of the Navy is enacting these changes, many initiatives within them will, over the next year, be evaluated for their efficacy before being fully implemented.

“Any success we may enjoy in the future will be enabled by an ever-more-agile force – led by agile people who thirst for knowledge and who are adept at thinking, learning, and processing information quickly,” said Undersecretary of the Navy, Thomas B. Modly. “The development of such a force does not happen by accident. It must be constantly cultivated through a renewed emphasis on education, and the deliberate construction of a learning culture across the entire naval service.”

Navy to Commission Littoral Combat Ship Tulsa

ARLINGTON, Va. – The Navy will commission its newest Independence-variant littoral combat ship, the future USS Tulsa (LCS 16), during a 10 a.m. PST ceremony Saturday, Feb. 16, at Pier 30/32 in San Francisco, the Defense Department announced in a Feb. 13 release.

U.S. Sen. James Lankford of Oklahoma will deliver the commissioning ceremony’s principal address. Kathy Taylor, former mayor of Tulsa, Oklahoma, is the ship’s sponsor. The ceremony will be highlighted by a time-honored Navy tradition when Taylor gives the first order to “man our ship and bring her to life!”

“This ship is named in honor of Tulsa, Oklahoma, but represents more than one city,” said Navy Secretary Richard V. Spencer. “USS Tulsa represents an investment in readiness and lethality and is a testament to the increased capabilities made possible by a true partnership between the Department of the Navy and our industrial base.”

The future USS Tulsa is the second naval vessel to honor Oklahoma’s third largest city. The first USS Tulsa was an Asheville-class gunboat designated as PG 22 that served from 1923 to 1944 before being renamed Tacloban. She earned two battle stars for World War II service. A cruiser to be named USS Tulsa was also authorized for construction during World War II, but the contract was canceled before it was built.

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

The LCS class consists of two variants, the Freedom variant and the Independence variant, designed and built by two industry teams. The Independence variant team is led by Austal USA, Mobile, Alabama, (for LCS 6 and the subsequent even-numbered hulls). The Freedom variant team is led by Lockheed Martin, Marinette, Wisconsin, (for the odd-numbered hulls).

USS Tulsa will join USS Freedom (LCS 1), USS Independence (LCS 2), USS Fort Worth (LCS 3), USS Coronado (LCS 4), USS Jackson (LCS 6), USS Montgomery (LCS 8), USS Gabrielle Giffords (LCS 10), USS Omaha (LCS 12) and USS Manchester (LCS 14) in their homeport of San Diego.

The ceremony, using hashtag #USSTulsa, can be viewed on the Navy Live blog at http://navylive.dodlive.mil.

SPAWAR Systems Center Names Change to Naval Information Warfare Centers

SAN DIEGO – Space and Naval Warfare Systems Command (SPAWAR) announced it will change the names of its Echelon III systems centers, SPAWAR Systems Center Atlantic in Charleston, S.C. and SPAWAR Systems Center Pacific in San Diego, Calif., to Naval Information Warfare Center Atlantic and Naval Information Warfare Center Pacific, respectively, SPAWAR Public Affairs said in a Feb. 13 release.

The changes will be effective Feb. 18. The new language "Naval Information Warfare Center," with the acronym NIWC, (pronounced Nī' wick) will apply to the names of all Naval Information Warfare Center sites falling under NIWC Pacific and NIWC Atlantic worldwide.

SPAWAR Commander Rear Adm. Christian Becker made the announcement Feb. 13 in his address to attendees at the WEST 2019 conference co-hosted by the U.S.

Naval Institute (USNI) and the Armed Forces Communications and Electronics

Association (AFCEA) at the San Diego Convention Center.

The name change demonstrates that information is a fundamental element of warfare, an essential concept of the Navy's Design for Maritime Superiority 2.0.

Use of 'warfare centers' in the names reflects the centers' focus, core capabilities and importance in the full spectrum

of warfighting. It also improves clarity of mission and purpose with stakeholders across the fleet and industry and throughout the broader Information Warfare community and Naval Research and Development Enterprise.

The name Naval Information Warfare Center also aligns the centers with Naval Air Systems Command's air warfare centers and Naval Sea Systems Command's surface and undersea warfare centers.

The intent of the name change is to recognize the importance of the Information Warfare mission and does not signal a change in SPAWAR's mission of identifying, developing, delivering and sustaining information warfighting capabilities.

"The advantage information warfare brings to the fight is at the core of our Navy's ability to compete and win today and in the coming decades," said Becker. "Recognizing our systems centers as Naval Information Warfare Centers reaffirms our commitment to accelerate the development and delivery of advanced warfighting capabilities to the fleet."

Belgian Navy Sees Cooperation Opportunities for Wind Farm Industry

ANTWERP, Belgium – Belgium's 40-mile long coastline is shorter than most countries, but Belgium is a maritime nation with one of the busiest seaports in the world, Antwerp, and sits astride the approaches to the Dutch port of Rotterdam. Together they are two of the busiest ports in Europe.

Standing off the coast of Belgium are found enough wind turbines to generate more than five percent of the national energy demand, increasing to 20 percent beyond 2020. The presence of offshore wind generation is growing, especially in Europe. Despite its relatively small coastal zone, Belgium is third in Europe behind the United Kingdom and Denmark in wind energy production. Instead of solely complicating navigation, Capt. Jan De Beurme, chief of staff of the Belgian Navy, said the cooperation with the wind farms industry could prove very useful.

“There is private owned infrastructure in place that could be shared with the Navy,” De Beurme said. “Antennas and radars can be mounted on the structures; offshore camera images can be shared to increase the maritime awareness and maritime picture in our coastal waters. In return the Navy can assure the security of these critical infrastructures that the wind farms are to Belgium.”

Antwerp prides itself on being the “crossroads of the global supply chain,” Beurme added.

De Beurme explains the joint Dutch-Belgian mine countermeasures project that will create new capabilities for both navies. The mine countermeasures ships will abandon the legacy minesweeper or mine hunter that must approach and enter the minefield to find or clear mines. Those ships have therefore traditionally been made of wood or composites so they won’t trigger magnetic influence mines. De Beurme said the new ships will remain outside minefields and rely on a “toolbox” of offboard remote and unmanned systems to enter the danger zones while the ship remains at a safe distance. As drone technology matures, the newer capabilities can replace the older systems.

Belgium’s Navy is a blue-water navy and is capable of distant open-ocean operations. While their ships will be interoperable with NATO mine warfare assignments anywhere in the alliance,

they will also be optimized to find and neutralize any mines introduced into their own coastal waters.

These offboard systems can be controlled from the ships, or from containerized control stations that can be placed where needed ashore. The unmanned underwater vehicles can carry sensors such as synthetic aperture sonar and side scanning sonar, as well as neutralization charges to destroy mines. The critical part of using underwater vehicles for mine hunting is to be able to communicate with those vehicles and quickly obtain the sensor data for analysis.

The matrix of wind structures can help create an underwater network to communicate with the drones, and even recharge their batteries.

Coastal security is a team effort, De Beurme said, involving the Navy, Federal Police and Customs working together from a single maritime information center. “We want to step up our maritime information center, and add new sensors.”

OPT to Develop Fiber Optic Mooring Technology for the Naval Air Warfare Center

MONROE TOWNSHIP, N.J. — Ocean Power Technologies Inc. (OPT) has been awarded a contract award from the U.S. Navy valued at $125,000, and an additional three options totaling $100,000 for a total potential contract value of $225,000, the company announced in a Feb. 12 release. Under this contract, OPT will immediately begin the development of a buoy mooring system which incorporates fiber optics for the transmission of subsea

sensor data to airplanes, ships and satellites. OPT will execute the work under its Innovation and Support Services line and will leverage its many years of experience with marine systems and U.S. Navy programs to address the Navy's need for reliable and low-cost "optical-mechanical mooring cables." Importantly, the fiber optic mooring concepts developed under this contract may be incorporated into OPT's PowerBuoy and Subsea Battery Module product lines.

"We're very excited for this Phase I award by the U.S. Navy to develop a fiber optic mooring line which may be used for both defense and commercial applications," said George Kirby, CEO of Ocean Power Technologies. "We believe that this new contract award further validates our technical expertise and experience with ocean energy systems and could also lead to additional future contract awards where we might utilize OPT technologies which are already in advanced stages of development. To date, OPT has earned 28 U.S. government awards, including eight Phase I awards, which led to five Phase II efforts and 15 Phase III efforts, all related to marine systems and applications. We welcome the opportunity that this new contract brings, and this award now allows us to immediately bid on a Phase II contract."

OPT has submitted several proposals to the U.S. Navy and the Office of Naval Research under its Innovation and Support Services line on topics such as powering acoustic and nonacoustic sensors and improving the persistence of unmanned underwater vehicles through battery recharging and critical data transfer. Additionally, OPT has successfully advanced its anchorless PowerBuoy design under a prior contract with the Office of Naval Research and is seeking to prototype the design for both defense and commercial applications.

"OPT has a long work history on Department of Defense projects," Kirby said. "Our most recent government effort has been around advancing our anchorless PowerBuoy design, and we're nearing the prototype stage. The anchorless PowerBuoy

design is very encouraging to our customers due to its innovative and patented approach to power generation and also the need for a quick-deploy solution throughout markets such as defense and offshore oil and gas.

“In addition, these markets are undergoing a radical transformation to cleaner and more efficient all electric, all digital and all autonomous subsea operations,” he said. “Rapid deployment of persistent power and real-time subsea data communications is the enabling technology. Thanks to our efforts over the past few years, OPT is positioned and ready to enable this transformation today. In fact, we currently have one PowerBuoy deployed for a global oil and gas operator, another

which is undergoing preparation for deployment, and we have two additional PowerBuoys in various stages of production.

SASC Chairman Inhofe: ‘$750 billion is where we need to be’ for 2020

WASHINGTON – The Senate Armed Services Committee chairman is less concerned about whether overseas contingency operations (OCO) funds are increased to get the right top line for defense funding as long as the total is $750 billion.

“We’ve got to have adequate funding,” Sen. James Inhofe said Feb. 12, when asked about reports that the Trump administration would propose a major increase in OCO funds to get the defense top line to over $700 billion without breaching the spending limit set by the 2011 Budget Control

Act, which goes back into effect next year unless Congress suspends it again.

“I don’t know how much it’s going to be, but I think it’s going to be an exaggerated figure to get up to what we need to defend America,” Inhofe told a Defense Writers Group breakfast Feb. 12 on Capitol Hill.

Inhofe referred repeatedly to last year’s report from the National Defense Strategy Commission’s warning that the U.S. military was falling behind Russia and China and needed to have steady funding increases of 3 to 5 percent above inflation to regain its lead. That means $750 billion in the fiscal 2020 defense funding, he said.

Both Congress and the administration have argued in the past that money for the on-going conflicts and other global crises should be moved into the base budget to help the armed services better plan for the future. OCO spending is not counted against the BCA funding caps and has been used in the past to add weapons already being bought in the base budget.

“I’ve been guilty of that myself,” Inhofe said.

But, he said, “$750 billion, I think that’s where we need to be. How we you get there? Are you going to be using some amount of OCO? … You need the money, $750 billion.”

In response to a later question about the administration’s newly released demand for an accelerated drive on artificial intelligence (AI), Inhofe said, “to me, there are other things we need to do first.”

While conceding that “China is ahead of us” on AI, “I’d like to look at the other areas where Russia and China are ahead of us.” He emphasized artillery, which has long been a major priority to him, partly because the joint artillery center of excellence is at Fort Sill, in his home state of Oklahoma. He also cited the high percentage of vintage F/A-18s that are

considered undeployable because of mechanical problems.

“These are things that need to be done. Our peer competitors – China and Russia – they have a lot of things that are better than ours. To me, that’s the priority. Behind that, things like AI.”

Inhofe also supported a rapid increase in F-35 production, even those the Lockheed Martin fighter is not expected to complete the comprehensive operational testing to prove it is fully combat ready until next year.

Noting the number of allied nations that are buying F-35s, in addition to the U.S. Navy, Marine Corps and Air Force, he said, “what we really need now, what our allies need, is the F-35.”

Inhofe said his committee plans to have the new National Defense Authorization Act on the Senate floor by June, despite not receiving the detailed defense budget until late March. He also urged the appropriations committees to get busier so the defense funding bill can be enacted before the Oct. 1 start of the new fiscal year.

Asked about President Donald Trump’s threat to transfer money from other accounts if Congress does not provide the $5.7 billion he wants for the Mexican border “wall,” Inhofe said, if it becomes necessary, I believe he will do the emergency … If it has to be that way, leave MilCom (military construction) alone.”

Final Resting Place of USS Hornet CV-8 Located in South Pacific

SEATTLE – Wreckage of the World War II aircraft carrier USS Hornet rests on the floor of the South Pacific Ocean around the Solomon Islands, 5,400 meters (nearly 17,500 feet) below the surface as discovered last month by the expedition crew of Paul G. Allen's Research Vessel (R/V) Petrel, the Navy's website said in a Feb. 12 post.

Hornet was best known for its part in the fateful Doolittle Raid that was launched in April of 1942, which was the first airborne attack of Japanese homeland targets including Tokyo. Led by U.S. Army Lt. Col. James Doolittle, all of the 16 B-25 planes that were launched from Hornet were unable to land at their designated airstrip in China, but the raid provided a boost to American morale, and put Japan on alert about our covert air capabilities.

In June, Hornet was one of three American carriers that surprised and sunk four Japanese carriers at Midway, turning the tide of war in the Pacific.

The ship was sunk during the exceptionally vicious Battle of Santa Cruz Island that started Oct. 25, 1943. Hornet proved an especially determined ship over the next 24 hours. Enduring a relentless, coordinated attack by Japanese dive-bombers and torpedo planes, her crew was ultimately forced to abandon the ship due to damage and resulting fires. She then defied American efforts to scuttle her with 16 torpedoes and 369 rounds of 5-inch shells. When Japanese forces approached shortly thereafter and fired four torpedoes from two Japanese destroyers late in the evening of Oct. 26, Hornet finally succumbed and slipped beneath the surface. She lost 111 Sailors from her crew of nearly 2,200.

"With the loss of Hornet and serious damage to Enterprise, the

Battle of Santa Cruz was a Japanese victory, but at an extremely high cost," said retired Rear Admiral Samuel Cox, director of Naval History and Heritage Command. "About half the Japanese aircraft engaged were shot down by greatly improved U.S. Navy anti-aircraft defenses. As a result, the Japanese carriers did not engage again in battle for almost another two years."

"Naval aviation came of age in World War II and American Sailors today continue to look to and draw inspiration from the fighting spirit of ships and crews like USS Hornet (CV 8)," Vice Chief of Naval Operations Adm. Bill Moran added. "Although her service was short-lived, it was meteoric.

"In the dark days following the Japanese surprise attack on Pearl Harbor, she and the Doolittle Raiders were the first Americans to punch back at Japan, giving hope to the nation and the world when things looked bleakest," Moran said. "She was there when the American Navy turned the tide in the Pacific at the Battle of Midway, and she was there when America started the long drive to Tokyo in the Solomon Islands. Mortally wounded during the vicious campaign at Guadalcanal and abandoned after all attempts to save her failed, she was finally sent below by the Japanese destroyers Akigumo and Makigumo.

"As America's Navy once again takes to the sea in an uncertain world, Hornet's discovery offers the American Sailor a timeless reminder of what courage, grit and commitment truly look like," Moran continued. "We'd be wise as a nation to take a long, hard look. I'd also like to thank the crew of Petrel for their dedication in finding and honoring her sacrifice."

The discovery of Hornet was made during R/V Petrel's first mission of 2019 after relocating from the Philippine Sea to the Solomon Islands to spend winter months in this arena. Operating out of Guadalcanal, the area is rich in history and prominence in terms of naval engagements.

"We had Hornet on our list of WWII warships that we wanted to locate because of its place in history as an aircraft carrier that saw many pivotal moments in naval battles," said Robert

Kraft, director of subsea operations for Vulcan. “Paul Allen was particularly interested in historically significant and capital ships, so this mission and discovery honor his legacy.”

The 10-person expedition team on the 250-foot R/V Petrel was able to locate Hornet’s position by piecing together data from national and naval archives that included official deck logs and action reports from other ships engaged in the battle. Positions and sightings from nine other U.S. warships in the area were plotted on a chart to generate the starting point for the search grid.

In the case of Hornet, she was discovered on the first dive mission of Petrel’s autonomous underwater vehicle and confirmed by video footage from the remotely operated vehicle, both pieces of equipment rated to dive down to 6,000 meters.

Ports Association Calls For Increasing Multimodal Project Funding, Eligibility

ALEXANDRIA, Va. – In written and oral testimony tomorrow (Feb. 13) before a hearing of the U.S. Senate Commerce, Science and Transportation Committee, the American Association of Port Authorities (AAPA) – the unified and recognized voice of America’s seaports – will say that nowhere in the country are there such stark examples of unmet infrastructure needs than in America’s ports, and in the land- and water-side transportation connections to them, the AAPA said in a Feb. 12 release.

“During the past six decades, there’ve been eight evolutions of the containership, resulting in ships today having

capacities of 18,000 TEUs and beyond, while our country has relied upon essentially the same infrastructure to accommodate and facilitate an astronomical growth in freight volumes," says AAPA Chairman William D. Friedman, chief executive officer of the Cleveland-Cuyahoga County Port Authority, who will testify before the Senate Commerce, Science and Transportation Committee. "Clearly, multimodal project funding levels and multimodal project eligibilities need to be improved."

Friedman will note that, in 2018, AAPA issued an infrastructure report in which its U.S. member port authorities identified more than $20 billion in multimodal funding needs over the next decade. "A top priority for the port industry continues to be multimodal funding."

To aid with finding solutions to the multimodal funding and project eligibility dilemma, among AAPA's FAST Act reauthorization recommendations are that:

• All freight program funding be 100 percent multimodal (verses being mode-specific).

• The multimodal cap on U.S. Department of Transportation INFRA (Infrastructure for Rebuilding America) grants and formula funding be lifted.

• A maritime supply chain title be included in the next USDOT reauthorization bill that recognizes the evolving supply chain needs of the multimodal freight network.

• Funding to support freight infrastructure improvements come from a gas tax increase, a Vehicle Miles Traveled program, and/or some concept of a 1 percent charge on the domestic cost of freight movement (i.e., a "waybill fee").

• The financing fee for federal Rail Rehabilitation Innovation Financing loans be removed.

Further noting that AAPA's 2019 freight infrastructure report, The State of Freight IV, identified nearly $4 billion in port security funding needs over the next decade, Mr. Friedman adds, "We need to invest in port infrastructure and we need to secure it."

The Senate Commerce, Science and Transportation Committee

hearing, titled America’s Infrastructure Needs: Keeping Pace with a Growing Economy, follows a similar U.S. House Transportation and Infrastructure Committee hearing on Feb. 7, titled The Cost of Doing Nothing: Why Investing in Our Nation’s Infrastructure Cannot Wait, in which AAPA is preparing written testimony that will include information on the association’s long-term funding solution for harbor maintenance.