CP Technologies Wins Mission Computer Modernization Contract for Greek P-3B Aircraft

SAN DIEGO – CP Technologies has won a contract to modernize and update the mission control computers in the P-3B Orion aircraft used by the Hellenic Navy and Air Force, the company said in a Jan. 29 release.

According to Michael McCormack, president and CEOof CP Technologies, "We won the contract because of our proven ability to meet the extreme environmental specifications, the ability to rapidly prototype the product and the overall performance of the computer."

The P-3 Orion is the standard for maritime patrol and reconnaissance, and is used for homeland security, anti-piracy operations, humanitarian relief, search and rescue, intelligence gathering, anti-submarine warfare and, recently, to assist in air traffic control and natural disaster relief support.

CP Technologies' mission computers are used in the ISR (intelligence, surveillance and reconnaissance) consoles onboard the aircraft and were designed to offer advanced computing technology in order to accommodate new ISR capabilities in the rough aircraft environment like advance map rendering and GPS tracking, sensor and surveillance data analysis, etc.

The unit is a fully sealed, convection cooled system that offers a high-performance balance of CPU/GPU processing. The combination of CPU/GPU performance, the ruggedized sealed design, and the advanced peripheral interfaces such as RS-232,

RS-422, Hi-Res Digital Video Outputs, and GB Ethernet, is what set CP Technologies apart from the competition.

The unit was designed to accommodate and certified to operate under extreme environmental conditions, aircraft crash safety as well as extreme shock and vibrations profiles to guarantee functionality and survivability remains consistent throughout the aircrafts many missions.

The contract was awarded to CP Technologies in May and was rapidly prototyped in 12 weeks. CP Technologies will continue to support the program until the expiration of the contract in 2025.

The Hellenic Air Force had five P-3Bs that had been in service since 1996. Assigned to the 353 Squadron based at Elefsis near Athens, these aircraft had been in storage pending a decision on the proposed midlife upgrades. The modernization plan is a seven-year program and includes the maintenance and support of five of the six P-3B Orion turboprop aircraft transferred to Greece by the United States during 1991 and 1992. In 2014, the U.S. State Department approved a Foreign Military Sale to Greece for P-3B aircraft overhaul and upgrade as well as associated equipment, parts, training and logistical support for an estimated cost of $500 million.

Marines 3D Print First Reinforced Concrete Bridge in Western Hemisphere

MARINE CORPS BASE QUANTICO, Va. – Marines from the 1st Marine Logistics Group (MLG) at Camp Pendleton, California,

transformed their motto – "Victory through Logistics" – to action when they successfully 3D printed a concrete bridge in December, with the help of the Marine Corps Systems Command Advanced Manufacturing Operations Cell (AMOC) and the Army Corps of Engineers.

During the Corps' annual Steel Knight exercise, Marines were trained on how to operate the Automated Construction of Expeditionary Structures – or ACES – printer, incorporated new equipment into the process, and printed and assembled a usable foot bridge to demonstrate the concrete 3D printing capability in an operational environment.

"One of our goals was for Marines to learn to operate the equipment on their own, which they did and it was great," said Capt. Matthew Friedell, AMOC project officer. "Another goal is that each time we do one of these tests, we use [fewer] people. Ultimately, we want one person standing there who hits 'print,' and the machine does all the work. We're getting there."

This was the first time in the U.S. or western hemisphere that a bridge was 3D printed on site rather than in a factory setting, Friedell said.

"This shows how close 1st MLG and the Marine Corps are to the bleeding edge of innovation," he said. "We didn't seek to break any new ground, but with Marine ingenuity, we sure did."

The demonstration included the use of a concrete mixing process that removes some of the leg work for Marines. Sailors with Naval Mobile Construction Battalion 5 at Port Hueneme, California, brought a volumetric mixer to the site, which saves about six Marines from having to mix the large amounts of concrete needed for the print job.

"The barracks hut print [conducted in August], was more difficult because Marines had to mix the concrete [themselves]," Friedell said. "They had to take five-gallon

buckets of gravel, pour them into a bigger bucket, and then use a fork lift to lift them up into the big mixer. The mixer had to mix it and then dump it into the pump. For [the bridge project], we used the volumetric mixer, which did all the gravel, mixed all the concrete and got it ready to pump without anyone doing the really hard work."

The AMOC provided the printer and led the effort as part of the Corps' only acquisition command, and the Army Corps of Engineers validated the bridge design to ensure it could bear the load, Friedell said. The idea and design for the bridge came from Marines in the 1st MLG.

"The 1st Marine Logistics Group is always trying to find new solutions when it comes to providing logistics support to I Marine Expeditionary Forces," said Brig. Gen. Stephen Sklenka, 1st MLG commanding general. "Seeing the Marines learn and train with new technology, then apply their technical expertise to find new ways of maximizing our capabilities on the battlefield showcases both their dedication and their creativity. This was a terrific demonstration of innovative ideas resulting in tangible progress toward usable results that advance future progress in logistics operations."

In addition to operational uses like bridges and barracks huts, Friedell envisions the Marine Corps using construction-sized additive manufacturing for the Corps' humanitarian relief work as well.

"I see us going in and building things that help communities," he said. "Making homes that don't fall over in a typhoon or hurricane; [providing] buildings and infrastructure that lasts for a while, and possibly leaving the equipment there so they can keep building."

The AMOC hopes to transition additive manufacturing to a program of record for the Marine Corps by fiscal 2021.

"The Army Corps of Engineers have been doing this work for the

past four years to get us where we are, and they did a great job with the program before the Marine Corps ever came onboard," Friedell said. "Our focus now is to help this transition into an actual system; a useable program of record. These experiments are helping us draft the requirements to get there."

The Marine Corps and Department of Defense logistics communities are excited about the possibilities, he said.

"The 3D printed bridge demonstration was an excellent example of innovation coming to fruition," Sklenka said. "It is exciting to see our Marines using their creativity to find ways to enhance the way we conduct logistics operations. 1st Marine Logistics Group continuously trains using new technology to test the boundaries of innovation so we can provide the support for maximum readiness. I think this 3D printed bridge was just the beginning of our progress."

Keel Authenticated for 12th Expeditionary Fast Transport

MOBILE, Ala. – The U.S. Navy held a keel-laying and authentication ceremony for its 12th expeditionary fast transport (EPF) vessel, Newport (EPF 12), at Austal USA's shipyard., Jan. 29, the company said in a release. The keel was said to be "truly and fairly laid" as it was authenticated by Charlotte Dorrance Marshall, signing her initials into the keel plate.

"We are excited to celebrate a major milestone in the construction of the 12th EPF of the class," said Capt. Scot Searles, Strategic and Theater Sealift program manager,

Program Executive Office-Ships. “These ships have proven versatility and capability, allowing them to be strategic assets to our fleet and partners abroad. The milestone we celebrate today is the first of many as we work to deliver another highly capable platform.”

EPFs are noncombatant vessels designed to operate in shallow-draft ports and waterways, increasing operational flexibility for a wide range of activities including maneuver and sustainment, relief operations in small or damaged ports, flexible logistics support, or as the key enabler for rapid transport. The ships are capable of interfacing with roll-on/roll-off discharge facilities, as well as on/off-loading vehicles such as a fully combat-loaded Abrams Main Battle Tank.

EPFs support a variety of missions including the overseas contingency operations, conducting humanitarian assistance and disaster relief, supporting special operations forces, and supporting emerging joint sea-basing concepts. EPFs are capable of transporting 600 short tons 1,200 nautical miles at an average speed of 35 knots. Each vessel includes a flight deck to support day and night aircraft launch and recovery operations. Burlington will have airline-style seating for 312 embarked forces with fixed berthing for 104.

USNS Burlington (EPF 10) was delivered in November, and Austal USA is currently in production on Puerto Rico (EPF 11), which was christened in November. The Navy issued Austal long-lead-time material contracts late last year for EPF 13 and EPF 14.

GD Develops Floating Platform for Civil Protection and Disaster Relief

MADRID — General Dynamics European Land Systems-Bridge Systems (GDELS-Bridge Systems) has been awarded a contract to develop a multifunctional, modular floating platform known as Pontoon Boat, or PoBo, the company announced in a Jan. 28 release.

The project was awarded under the Innovation Program for the Support of Diversification Strategies of Defense Companies in Civil Security Technologies, or DIVERS. DIVERS is a program launched by Germany's Federal Ministry of Economics and Energy, with VDI Technologiezentrum GmbH as the responsible project executing agency.

"The PoBo is a modularly configurable floating device," said Sascha Wahlster, head of civil activities for GDELS-Bridge Systems. "It can be used to assemble heavy-duty transport, working, diving and recovery platforms or bridges."

"By means of specially developed propulsion systems and supported by drone based underwater sensors, safe, semi-autonomous driving in flooded and unmapped areas will be made possible," Wahlster said.

The PoBo will be developed to be ergonomically friendly and will have a mobile virtual reality system to conduct fast and cost-effective training.

GDELS-Bridge Systems, the market leader in military floating bridges is a part of the newly-established General Dynamics European Land Systems—Deutschland. The company, which employs 400 people, has been developing and producing these systems in Kaiserslautern, Rhineland-Palatinate, for 65 years.

“Essential for the success of our application was the integration not only of existing long-standing cooperation partners such as the Entwicklungszentrum für Schiffstechnik und Transportsysteme e.V. (Development Centre for Ship Technology and Transport Systems) in Duisburg and the Bremen-based company szenaris specialized in learning programs and simulations for digital learning,” said Christian Kauth, Managing Director of GDELS-Bridge Systems. “Through our collaboration in the Science and Innovation Alliance Kaiserslautern and the Commercial Vehicle Cluster, many new cooperation approaches have emerged.

“Consequently, the integration of the Institute for Robotic Systems at Kaiserslautern University of Technology and the Fraunhofer Institute for Industrial Mathematics into the project developed,” Kauth said. “The decisive factor, however, was that we were able to win the German Federal Agency for Technical Relief in close cooperation with national fire brigades and police authorities as a project partners, as this is the only way to successfully develop a system that optimally supports relief, rescue and security forces in their challenging tasks worldwide.”

Navy Awards Boeing $2.4 Billion P-8A Poseidon Contract

ARLINGTON, Va. — The U.S. Navy has awarded Boeing a $2.4 billion production contract for the next 19 P-8A Poseidon aircraft, the company announced in a Jan. 28 release.

The contract includes 10 aircraft to add to the current

inventory of P-8As in the U.S. Navy fleet, all five jets currently under contract for Norway and the four aircraft remaining for the existing United Kingdom contract, bringing the total U.K. acquisition to nine aircraft.

The United Kingdom and Norway are acquiring the Boeing aircraft through the Foreign Military Sales process and will receive a variant designed and produced for the U.S. Navy called the P-8A Poseidon. The United Kingdom will receive its first aircraft this year and Norway will begin receiving aircraft in 2021.

The P-8 is a long-range multimission maritime patrol aircraft capable of broad-area, maritime and littoral operations. A military derivative of the Boeing Commercial Next-Generation 737 airplane, the P-8 combines superior performance and reliability with an advanced mission system that ensures maximum interoperability in the battle space.

The P-8 is militarized with maritime weapons, a modern open mission system architecture, and commercial-like support for affordability. The aircraft has been modified to include a bomb bay and pylons for weapons – two weapons stations on each wing – and can carry 129 sonobuoys. The aircraft is also fitted with an in-flight refueling system. With more than 180,000 flight hours to date, P-8 variants, the P-8A Poseidon and the P-8I, patrol the globe performing anti-submarine and anti-surface warfare; intelligence, surveillance and reconnaissance; humanitarian; and search and rescue missions.

Coast Guard Patrols South

Pacific in Support of International Fisheries

HONOLULU – Following a stop in Fiji in late January, the crew of the Coast Guard Cutter Mellon continued their South Pacific patrol in support of counter-Illegal, Unregulated and Unreported fishing and global security missions, the 14th Coast Guard District said in a Jan. 26 release.

The presence of a high-endurance Coast Guard cutter conducting operations in the region demonstrates the U.S. commitment to regional partnerships and strengthening a coalition of like-minded countries to strengthen regional maritime governance and promote a rules-based regime for fisheries.

Mellon's crew is supporting international fisheries on the high seas and enforcement of the Western Central Pacific Fisheries Commission (WCPFC). Upon arrival in the WCPFC convention area, they partnered with the Canadian Armed Forces who flew seven reconnaissance flights improving maritime domain awareness and aiding in the enforcement of the WCPFC convention.

Patrolling over 1,110 square miles within the WCPFC convention area, the Mellon's law enforcement team boarded two vessels, one fishing vessel and one bunkering vessel. Both boardings resulted in potential violations of conservation management measures including high seas transshipment and specifications for the marking and identification of fishing vessels.

"Participating in the WCPFC ties into a broader strategy the Coast Guard is pursuing in the Indo-Pacific region," said Capt. Stephen Burdian, commanding officer, cutter Mellon. "Throughout the area, the U.S., and by extension the Coast Guard, is encouraging relationships respecting the sovereignty, supporting fair and reciprocal trade, and the

rule of law in an open and free Oceania. Through a tactical lens, that strategy looks like a Coast Guard boarding of a foreign fishing vessel, while on the high seas or in a sovereign Exclusive Economic Zone jointly with a member of that country's enforcement team. On this patrol, we are fortunate to have excellent support from the U.S. Navy, U.S. Marine Corps, and our Canadian counterparts."

While on a port call in conjunction with the U.S. Embassy in Suva, Fiji, the crew strengthened partnerships with Pacific Islands Nation communities by participating in community relations events at a local animal shelter, children's hospital and garden. At the animal shelter crew members engaged with kittens and puppies while giving animals baths and general clean-up of the shelter. At the children's hospital and garden, the crew read books to children and tidied up the garden area.

Mellon's crew of 150 departed their homeport of Seattle shortly after Christmas. They made a brief stop in Hawaii for fuel and supplies. This stop was leveraged for training as the crew conducted Astern Refueling-at-Sea training with the U.S. Coast Guard Cutter Joseph Gerczak.

Also, they worked with Air Station Barbers Point crews to complete 72 shipboard helicopter evolutions over three days, resulting in the qualification of three MH-65 Dolphin helicopter pilots and 10 flight deck personnel aboard Mellon.

The cutter also embarked two Canadian Department of Fisheries and Oceans officers, two U.S. Navy Aerographer's Mates, and one U.S. Marine Corps Mandarin translator while in Hawaii for the upcoming operations. The crew is more than 8,000 miles into their patrol and have taken every opportunity for professional development with more than 40 crew earning new qualifications.

Oceania covers an area of 3.3 million square miles and has a

population of 40 million and is home to some of our valued strategic partners in the Pacific Island Nations as well as Australia and New Zealand, with whom the U.S. has aligned for more than a century.

The importance of the Pacific Islands is very evident as the Coast Guard continues operations in the region and the U.S. strengthens partnerships with the governments of these nations. We recognize tourism and exports, both requiring a great deal of commercial vessel traffic, are a primary economic driver. Tuna represented a nearly $5 billion industry in 2015 with more than half the world's tuna is sourced from the Western Pacific. In 2017 reported landings were 2.5 million tons of fish.

The presence of a high-endurance cutter in this part of the Pacific to enforce Conservation and Management Measures established by the WCPFC represents the U.S. and the service's commitment to our partnerships in the region. This body represents another essential collaboration. The WCPFC is an international body made up of 43 nations and international organizations. Members agree to allow the 13-enforcer nations in the pact to board and record any potential violations on their nationally flagged vessels. The findings go to the WCPFC who notifies the vessel's flag state of the suspected infraction for further investigation.

"The U.S. Coast Guard and the Canadian Department of Fisheries and Oceans have a long history of working together to ensure the viability of fish stocks off North America. Working with experts from Canada and regional leaders like Fiji is vital to ensuring food security and the rule of law in Oceania," said Capt. Robert Hendrickson, chief of response for the 14th District. "Working together we are helping to ensure a more secure, free and open Indo-Pacific."

MCM Mission Package Completes Integration Testing of Unmanned Vehicles

SAN DIEGO – The Littoral Combat Ship (LCS) Mission Module Program successfully completed shipboard integration testing of two unmanned systems on board USS Independence (LCS 2) Jan. 14, Naval Sea Systems Command said in a Jan. 24 release.

The two systems – the Knifefish unmanned undersea vehicle (UUV) and Unmanned Influence Sweep System (UISS) – are part of the Mine Countermeasures Mission Package (MCM MP), which uses a system-of-systems approach to target specific portions of the water column and segments of the MCM detect-to-engage sequence.

During these integration events, both the Knifefish and UISS successfully verified the communications link between Independence and the unmanned systems as well as executed multiple launch and recovery evolutions from the ship. These test events mark a critical milestone for the LCS Mission Module Program, having now successfully tested each vehicle in the MCM MP (that is, an MH-60S helicopter, MQ-8B Fire Scout unmanned helicopter, UISS and Knifefish UUV) on board an Independence-variant LCS.

In addition to UISS and the Knifefish UUV completing integration tests, the program has certified all the aviation modules for the MCM MP for deployment on Independence-variant ships. These airborne MCM systems provide combatant commanders the ability to rapidly deploy systems that can detect near-surface mines as well as neutralizes mines in the water and on

the bottom without requiring Sailors to sail into the minefield. Additionally, the Coastal Battlefield Reconnaissance and Analysis system, which is a vertical-takeoff unmanned aerial vehicle payload, provides a much-needed beach zone mine-detection capability in support of the amphibious assault mission.

These tests are a subset of a comprehensive test program that encompasses shore-based system testing to characterize individual systems prior to completing final integration on an LCS. The LCS Mission Module program office will continue to incrementally deliver MCM MP systems to the fleet in advance of the formal MCM MP initial operational test and evaluation events beginning in 2021.

Austal USA Awarded Contract for LCS Post-Delivery Work in Mobile

MOBILE, Ala. – The U.S. Navy awarded Austal USA a $16.3 million contract Jan. 24 to perform extended industrial post-delivery availability work at its Mobile manufacturing facility – a first for Austal USA and the Navy, the company said in a release.

Austal USA will perform post-delivery work on Littoral Combat Ship 20, the future USS Cincinnati (LCS 20), at its Vessel Completion Yard along the Mobile River. This work will include engineering, management and production services in support of prefabrication efforts, material procurement and execution of work items for the LCS 20 Extended Industrial Post Delivery Availability.

Typically, this type of work is performed in San Diego, but through efforts to streamline production, support and sustainment for the LCS program, Austal USA and the Navy are teaming to reduce post-delivery cost and increase efficiency by performing additional work at Austal's facility in Alabama.

"This is an important step in the growth of our post-delivery business," said Austal USA President Craig Perciavalle. "We are excited to continue to expand our relationship with the Navy to do new post-delivery work in Mobile."

Established in 1999, Austal USA has grown to become the fifth largest shipbuilder in the United States through innovative practices. The company's moving modular assembly line revolutionized the shipbuilding industry and helped it capture the U.S. Navy's expeditionary fast transport contract and the Independence-variant LCS contract, now a critical part of the shipbuilding industrial base supporting nearly 10,000 suppliers across the country.

As the company continues to invest in its workforce and facilities, Austal USA is expanding its offerings in small surface combatants, auxiliary support ships, autonomous vehicles and worldwide post-delivery support and sustainment.

"We're appreciative of the recognition and confidence the U.S. Navy has displayed in us through continuous contractual awards in ship construction and post-delivery, including the recent award as prime contractor for the drydocking of LCS 14," said Perciavalle. "But I can tell you, we've only scratched the surface on what Austal USA can provide."

Coast Guard Assists 17 Fishermen in Series of Responses off Pacific Northwest Coast

SEATTLE — Coast Guard crews along the Oregon and Washington coasts have assisted 17 fishermen in five responses since Jan. 20, the 13th Coast Guard District said in a Jan. 25 release.

Response efforts included crews from Coast Guard Station Yaquina Bay, Coast Guard Station Cape Disappointment and Coast Guard Air Facility Newport, in coordination with members at Coast Guard Sector Columbia River and Coast Guard Sector North Bend.

The two-person crew aboard the commercial fishing vessel Zephyr was escorted across the Yaquina Bay Bar in Oregon by a 47-foot Motor Lifeboat (MLB) crew from Station Yaquina Bay on Jan. 20. The crew of the 31-foot fishing vessel reported taking on water 17 miles off the south of bay with less than 500 pounds of crab aboard. The onboard pump and auxiliary pumps were able to keep up with the flooding as the fishing crew were escorted in. An MH-65 Dolphin aircrew from Air Facility Newport launched as well.

A four-person crew aboard the commercial fishing vessel Dream was escorted across the Columbia River Bar and safely moored in Ilwaco by a Station Cape Disappointment boat crew aboard the 52-foot MLB Triumph on Jan. 21. The 42-foot fishing vessel crew reported experiencing fuel injector issues while attempting to cross the bar with 1,000 pounds of crab aboard.

A three-person crew aboard the commercial fishing vessel Miss Jessie was towed into Ilwaco by a 47-foot MLB crew from Station Cape Disappointment on Jan. 21. The crew of the 36-

foot fishing vessel reported they lost propulsion almost three miles west of Ocean Park where they anchored with 1,500 pounds of crab aboard until the Coast Guard crew arrived.

A four-person crew aboard the commercial fishing vessel Redeemer was towed to Newport, Oregon, by Station Yaquina Bay boat crew aboard the 52-foot MLB Victory on Jan. 21. The crew of the 51-foot fishing vessel reported they lost steering while on approach to the Yaquina Bay entrance with 5,000 pounds of crab aboard.

A four-person crew aboard the commercial fishing vessel Triggerfish was towed into Newport by Victory on Jan. 24. The 42-foot fishing vessel crew reported they lost steering almost two miles west from the Yaquina Bay entrance with no catch aboard.

Coast Guard stations along the coast maintain ready crews in the event of emergencies, which often involve the use of the 47-foot and 52-foot MLBs. The 52-foot MLB is unique in that they are only located in the Pacific Northwest and are the only Coast Guard vessels under 65 feet with names. The four vessels are stationed at Grays Harbor, Cape Disappointment, Yaquina Bay and Coos Bay.

Northrop Grumman Gets LRIP Authorization for SEWIP Block 3

BALTIMORE – Northrop Grumman Corp. has received authorization to proceed with low rate initial production (LRIP) of Surface Electronic Warfare Improvement Program (SEWIP) Block 3 systems

following a successful Milestone C decision for the SEWIP Block 3 AN/SLQ-32(V)7 program.

Milestone C is a government-led review to assess a program's performance and readiness to enter the production and deployment phase. The successful Milestone C decision for SEWIP Block 3 recognizes the accomplishments of the Northrop Grumman and Navy team in demonstrating the capability of this groundbreaking electronic warfare (EW) capability.

"Milestone C approval and the start of LRIP are significant milestones for the SEWIP Block 3 program," said Capt. Seiko Okano, the Navy's major program manager of above water sensors. "SEWIP Block 3 is a critical capability that the fleet needed yesterday to pace the evolving anti-ship cruise missile threat. We must continue to push to deliver this critical electronic warfare improvement to the fleet on schedule and cost."

SEWIP Block 3 is the third in a series of block upgrades of the AN/SLQ-32 electronic warfare system which provides electronic attack capability improvements required to pace the evolving anti-ship missile threat. Northrop Grumman has provided electronic warfare expertise to the legacy AN/SLQ-32 EW system for over four decades.

With the Navy elevating the electromagnetic spectrum as a warfighting domain, SEWIP Block 3 is a cornerstone capability that will meet the urgent operational needs of the Navy in that domain. SEWIP Block 3 provides game-changing improved capability for non-kinetic electronic attack options.

"I am very proud of the entire team in achieving this significant engineering milestone despite the complexities of pursuing such a demanding technological goal," said Ingrid Vaughan, vice president and general manager, navigation and maritime systems division, Northrop Grumman Mission Systems. "The relentless commitment of the U.S. Navy Program Executive

Office Integrated Warfare Systems (PEO IWS) and Northrop Grumman team in developing this revolutionary electronic attack capability will dramatically assist our fleet in pacing 21st century threats.”