DHS S&T and NOAA Transition Harmonized Waterway Database to Coast Guard

WASHINGTON – The Department of Homeland Security (DHS) **Science and Technology Directorate** (S&T) is delivering a harmonized geospatial dataset of national waterways to all federal agencies that comprise the U.S. Committee on the Marine Transportation System (CMTS), the directorate said in an Oct. 25 release.

The "Harmonized Waterway" project and the delivered dataset will enable enhanced delivery of critical Marine Safety Information (MSI) to mariners in U.S. waters, as well as improve inter-agency coordination to advance federal waterways management. The **Coast Guard** will host and maintain this geospatial dataset and make this information available online, at no cost to the public. In addition, waterways managers and planners, industry leaders and researchers will have a new tool to help study and monitor our national waterways.

"The Harmonized Waterway dataset will make it possible for anyone using U.S. waterways – from ships engaged in international trade and commercial fishermen, to recreational boaters – to go online to find the navigational information they need to sail in U.S. waters," said Dr. Dimitri Kusnezov, DHS undersecretary for Science and Technology.

With the delivery of the database, the Coast Guard will now transition its delivery of MSI from referencing the **National Oceanic and Atmospheric Administration** (NOAA) paper chart identification name and number to the harmonized waterway name.

"The transition away from paper charts and manual application of MSI to electronic charts allows the Coast Guard to improve

our delivery of critical safety information to the mariner and represents a major milestone in our efforts to implement the CMTS Strategic Implementation of e-Navigation," said Mike Emerson, the Coast Guard's director of Marine Transportation Systems.

"The Harmonized Waterway project will help immensely as we transition away from traditional paper charts and focus on electronic charts as the primary product for navigation," said NOAA Adm. Benjamin Evans, director of NOAA Office of Coast Survey. "Working in concert with other agencies helps us do this in an efficient, unified manner."

"The Harmonized Waterway program is a major leap forward for the U.S. Marine Transportation System and its ability to provide mariners with the best information for navigating our waterways. The success of this project also highlights the importance of our interagency collaboration and partnerships, and the CMTS has been a proud supporter of this project since its inception," said Helen Brohl, executive director, CMTS.

Another benefit the Harmonized Waterway data affords the maritime community is to deconflict and synchronize names and abbreviations for rivers, bays and landmarks, which can differ between local, state and federal agencies.

"The database is much more agile and can be updated and made available to mariners electronically much more quickly than paper charts," said David Paquette, S&T **Maritime Safety and Security** program manager.

The Coast Guard is coordinating the release of its revised Local Notice to Mariner reports with NOAA and anticipates the transition will begin in 2023.

For more information about S&T's innovation programs and tools, visit **https://www.dhs.gov/science-and-technology/business-opportunities**.

Mercury's New Electronic Warfare Combat Training Pod Available for Order Following Successful Flight Testing

The mPOD jammer training pod is designed to emulate realistic combat scenarios. *mPOD*

ANDOVER, Mass. – Mercury Systems Inc., a leader in trusted, secure mission-critical technologies for aerospace and defense, announced Oct. 25 that its new mPOD, a rapidly reprogrammable electronic attack (EA) training system designed to train pilots using realistic, near-peer jamming capabilities, has successfully completed initial flight testing and is available for order.

Tactical Air Support, a leader in commercial air services, tactical aviation training and technical advisory services for U.S. military and international partners, oversaw three days of flight testing that ran beyond visual range tactical intercept training engagements replicating adversary tactics. F-5 aircraft equipped with Mercury's mPOD EA training system successfully broke, delayed and denied opposing fighter radar locks, created multiple false targets on the opposing fighter radar and performed other electronic attack techniques.

To sharpen their combat skills, pilots need to train in mock air-to-air combat with other pilots operating as adversaries. Using mPOD, "adversary" pilots can emulate enemy jamming techniques accurately, conditioning aircrews to evolving threat scenarios and better preparing them for real combat.

“Our aircrew need to train against realistic threat representative systems,” said RC Thompson, CEO of Tactical Air. “Our close working relationship with Mercury has resulted in a state of the art, internally configured EA capability fully integrated with our open architecture sensor suite. The result is threat realism with no performance penalty on our aircraft. It has been a pleasure to work with such an innovative and dynamic company.”

“We are excited to begin offering our mPOD training system to organizations around the world,” said Mark Bruington, vice president, Mercury Mission Systems. “mPOD is an innovative solution that can be programmed quickly and will help U.S. and allied military pilots develop tactics to maintain a strategic advantage over adversaries. It will also increase pilot and aircraft survivability and reduce training costs through integrated threat presentations.”

mPOD is built with proven technology for electronic warfare training, test and evaluation:

- Simultaneously emulate multiple National Air and Space Intelligence Center (NASIC)-validated threats with proven Filthy Buzzard digital RF memory (DRFM) technology developed and validated over 35 years in partnership with the U.S. Air Force and Navy
- Quickly reprogram missions and threats for different aircraft and radar systems in minutes via an intuitive software interface
- Speed integration with the aircraft display and control panel using the user interface or an integrated cockpit control panel
- Attach the mPOD to any aircraft weapon’s pylon or integrate it within the aircraft to reduce drag and maintain aircraft performance
- Decrease overall sustainment cost through a scalable and modular design with six swappable, high MTBF hardware components including a wideband Meggitt antenna

L3Harris Invests in Seasats to Accelerate New Autonomous Maritime Capabilities to the Navy

L3Harris Techonolgies announced its strategic investment in Seasats for their low-cost, solar-powered maritime autonomous surface vehicles. *L3HARRIS*

MELBOURNE, Fla. – L3Harris Technologies has made a strategic investment in Seasats, a privately-owned company involved in the design and production of low-cost, solar-powered maritime autonomous surface vehicles (ASV) for military and commercial use, L3Harris said in a release.

L3Harris is making its investment to fuel collaborative development and accelerate production of Seasats' X3 micro-ASV, whose unique design and low-signature waterline makes it difficult to detect by sight and radar. The X3 features

stealthy performance and reliable six-month endurance in all weather conditions for a fraction of the price of current small maritime ASVs, and provides a complement to L3Harris' large and medium-sized ASV offerings.

"Our U.S. Navy customers are pursuing innovative solutions to reliably and efficiently patrol the waters from the Red Sea into the Persian Gulf and we understand their urgent need for proliferated maritime ASV architectures," said Daniel Gittsovich, vice president, Corporate Strategy and Development, L3Harris. "Our investment and collaboration with Seasats provides a proven, multi-capability solution for global maritime security challenges."

Inexpensive, versatile and ideally suited to host a variety of maritime payloads, the X3 is well positioned to enhance the counter-piracy, mine clearing, intelligence, surveillance and reconnaissance, and electronic warfare solutions L3Harris already provides its customers.

Seasats can also serve commercial clients by pairing platforms and sensors to enable advanced hydrographic surveys, infrastructure monitoring, and scientific discovery. Future collaboration and technology sharing between L3Harris and Seasats has the potential to increase the autonomous capabilities, artificial intelligence and endurance of the X3 while cutting production time up to 75 percent.

"The L3Harris team recognized the value in pairing their payloads and sensors with our versatile platform because together they create an operations-ready solution for a wide range of critical military and commercial uses," said Mike Flanigan, CEO of Seasats. "Our previous tests and demonstrations with the Navy were enthusiastically received and we are looking forward to making collaborative improvements with L3Harris as we prepare for operational capabilities testing with Task Force 59 in the Arabian Peninsula next year."

The U.S. Navy 5th Fleet commander, Vice Adm. Brad Cooper, recently announced a goal to have at least 100 unmanned surface vessels patrolling the Arabian Peninsula by mid-2023. Earlier this year the Navy invited Seasats to participate in its "Digital Horizon 2022" exercise designed to develop maritime domain awareness and accelerate the Navy's robotic and artificial intelligence maritime capabilities.

Naval Stakeholders Assess Lessons Learned from Ukraine Conflict for Future War at Sea

Ships from multiple NATO nations including Italy, Spain,

Germany and the United States, participate in Exercise Mare Aperto 22-2, a high-end exercise sponsored by the Italian Navy aimed at strengthening and enhancing the combat readiness of participating assets in the conduct of maritime operations. *U.S. NAVY / Mass Communication Specialist 2nd Class Ezekiel Duran*

PARIS – Naval stakeholders are continuing to learn lessons from the ongoing conflict in Ukraine, and are considering the implications of these lessons for future naval warfare.

In workshop briefings given at the Euronaval 2022 exhibition in Paris, France, in mid-October, navies and naval industry alike discussed lessons ranging from strategic to operational to technological contexts.

Capt. Yann Briand, a French Navy officer serving as strategic policy branch head in France's Ministry of Defence, set out several lessons France is learning from the Ukraine war.

"The first one is that it recalls the fundamentals of naval combat at sea – that is to say, violence, velocity, and attrition," Briand said. Second, he underscored the wider strategic context of "the central role of nuclear deterrence" in the crisis.

"Another point – one not specific to the French navy, but the same for all the world's navies – is we are in close contact with our competitors," Briand said. In other words, he continued, "at sea, there is the possibility to send different political messages in a very subtle way."

"You use a fire-control radar, you come very close to another ship: all this is something you can do at sea that you cannot do on land."

This process works due to professional approaches on all sides, he said. However, he noted, instability persists.

Finally, Briand said, "Alliances and partnerships are more than very useful," with countries and their navies not able to

address all such challenges alone.

The lessons learned are also indicative of a wider shift in the nature of security.

“In the last 30 years, the stability of France and Europe was based on laws, regulations and treaties; now, it is more based unfortunately on physical defense – weapons, fighters, aircraft carriers,” Briand said.

Richard Keulen, a former Royal Netherlands Navy officer and frigate commander and now Dutch shipbuilding company Damen Naval Division’s director for Naval Sales Support, mirrored this perspective.

“The Baltic and Black Sea show us that Europe is flanked by important and disputed waters. Europe is depending for its prosperity and freedom to maneuver on a mare librum, in the Mediterranean also, the wider Atlantic, and even waters east of Suez.”

“So, innovation in defense is extremely important, as clearly witnessed for example in the Ukraine war,” Keulen said. “We have seen the pictures.”

“We saw the extensive use of drones. We saw the sinking of the [Russian Slava-class cruiser] Moskva. We also witnessed the extension into northern waters of hybrid warfare towards the seabed.”

In the Baltic Sea, the two Nordstream gas pipelines both suffered ruptures recently, although the cause of the ruptures has not been confirmed publicly. Such incidents prompted regional concerns about the security of sea lines of communication, including on the seabed.

“This latter phenomenon for example raises concerns and awareness in the Netherlands and its neighboring countries in the North Sea area, around the busiest waters in Europe,”

Keulen said.

Keel Authenticated for Future USS Robert E. Simanek

The keel for the future USS Robert E. Simanek (ESB 7), a Lewis B. Puller-class Expeditionary Sea Base (ESB), was laid at General Dynamics National Steel and Shipbuilding Company (GD-NASSCO) shipyard in San Diego, Oct. 21. *GENERAL DYNAMICS NASSCCO*

The keel for the future USS Robert E. Simanek (ESB 7), a Lewis B. Puller-class Expeditionary Sea Base (ESB), was laid at General Dynamics National Steel and Shipbuilding Company (GD-NASSCO) shipyard in San Diego, Oct. 21, Team Ships Public Affairs said in a release.

The ship is named for Private First Class Robert Ernest Simanek, who was awarded the Medal of Honor for shielding fellow Marines from a grenade at the Battle of Bunker Hill during the Korean War. The Medal of Honor was presented to him by President Dwight D. Eisenhower in a White House ceremony in 1953.

Simanek recently passed away on August 1, 2022. In addition to the Medal of Honor, he received a Purple Heart award, the Korean Service Medal with two bronze service stars, the United Nations Service Medal and the National Defense Service Medal. His daughter, Ann Simanek, is the sponsor of the ship and attended the keel laying ceremony.

“We are honored this ship will celebrate the late Robert E. Simanek’s legacy as a Medal of Honor recipient and Korean War veteran and his dedication to our country,” said Tim Roberts, Strategic and Theater Sealift program manager, Program Executive Office Ships. “ESBs provide a critical capability to the fleet and provide for increased flexibility.”

Expeditionary Sea Base ships are highly flexible platforms used across a broad range of military operations supporting multiple operational phases. Acting as a mobile sea base, they are a part of the critical access infrastructure that supports the deployment of forces and supplies to provide prepositioned equipment and sustainment with adaptable distribution capability.

These ships support Aviation Mine Countermeasure and Special Operations Force missions. In addition to the flight deck, the ESB has a hangar with two aviation operating spots capable of handling MH-53E equivalent helicopters, accommodations, workspaces and ordnance storage for embarked force, enhanced command, control, communications, computers and intelligence (C4I). These ships support embarked force mission planning and execution and has a reconfigurable mission deck area to store embarked force equipment, including mine sleds and Rigid Hull

Inflatable Boats (RHIBs).

In 2019, the Navy decided to commission all Expeditionary Sea Base ships to allow them to conduct a broader and more lethal mission set compared to original plans for them to operate with a USNS designation. A Navy O-6 commands ESBs and a hybrid-manned crew of military personnel and Military Sealift Command civilian mariners. This crew makeup provides combatant commanders with increased operational flexibility in employing the platform.

Construction of the future USS John L. Canley (ESB 6) and the Navy's John Lewis Class Fleet Replenishment Oilers (T-AO) are ongoing at GD-NASSCO.

USS Milwaukee Deploys to Support Regional Cooperation and Security

Family members wave to their loved ones as Freedom-variant littoral combat ship USS Milwaukee (LCS 5) Departs Naval Station Mayport 18 Oct. Milwaukee is one of four ships assigned to Surface Division 21. *U.S. NAVY*

MAYPORT, Fla. – The Freedom-variant littoral combat ship USS Milwaukee (LCS 5), along with the "Dragon Whales" of Helicopter Sea Combat Squadron (HSC) 28 Detachment 9 and embarked U.S. Coast Guard Law Enforcement Detachment (LEDET), departed from Naval Station Mayport Oct. 18, starting its second deployment this year to support U.S. 4th Fleet area of operations, said Lt. Anthony Junco of Commander, Littoral Combat Ship Squadron Two in an Oct. 19 release.

Milwaukee will support counter-illicit trafficking in the Caribbean and the Eastern Pacific. Milwaukee's operations will also involve exercises and exchanges with partner nations, supporting U.S. 4th Fleet efforts to enhance capability and improve interoperability e while reinforcing the Fleet's position as the regional partner of choice.

Deploying an LCS to the region demonstrates the U.S. commitment to regional security. The ship's size, speed and agility make LCS ideal for narcotics interdictions, partner engagements and port access.

"This crew is excited to take the ship on another deployment to 4th Fleet. We have some new Sailors that are looking forward to see new parts of the world, and the Sailors who deployed last time are ready to execute their mission once again," said Cmdr. Brian A. Forster, commanding officer of Milwaukee. "The interoperability and exercise with our partner nations were the highlight of last deployment and we look forward to doing the same. Building peace through partnership is a core aspect of any deployment and the Sailors of USS Milwaukee are looking forward to working with our allies."

Manned by more than 100 Sailors, Milwaukee's crew will consist of surface warfare mission-package personnel, a U.S. Coast Guard law enforcement detachment and an aviation detachment, who will operate the embarked MH-60S helicopter.

USS Milwaukee is operationally assigned to U.S. 2nd Fleet and is one of four littoral combat ships under Surface Division 21.

Middle East Naval Coalition Expands with Seychelles as

10th Member

Graphic image depicting the flag of the Indian Ocean island nation of the Seychelles and its shoreline, Sept. 23. *U.S. ARMY / Sgt. Terry Vongsouthi*

MANAMA, Bahrain – U.S. Naval Forces Central Command (NAVCENT) announced Oct. 19 the Indian Ocean island nation of the Seychelles has joined the International Maritime Security Construct (IMSC), a multinational maritime coalition established in 2019 to deter attacks on commercial shipping in the Middle East.

Seychelles becomes the tenth member of IMSC and its operational arm, Coalition Task Force Sentinel, which also welcomed Romania in March. Headquartered in Bahrain, IMSC is led by NAVCENT.

“We are very excited to now welcome Seychelles, another great maritime partner in the region,” said Vice Adm. Brad Cooper, commander of NAVCENT, U.S. 5th Fleet and Combined Maritime

Forces. “Having representation from countries all over the world makes us a stronger team.”

IMSC was formed in July 2019 in response to increased threats to merchant mariners transiting international waters in the Middle East. Coalition Task Force Sentinel was established four months later to deter state-sponsored malign activity and reassure the merchant shipping industry in the Bab al-Mandeb and Strait of Hormuz.

“Through our presence across the Middle East, we continue to strengthen our coalition and build new partnerships while reassuring those who operate in this region,” said United Kingdom Royal Navy Commodore Ben Aldous, commander of IMSC and Coalition Task Force Sentinel.

In addition to Seychelles and Romania, IMSC’s member-nations include Albania, Bahrain, Estonia, Lithuania, Saudi Arabia, the United Arab Emirates, United Kingdom and United States.

Seychelles is also a member of Combined Maritime Forces, another major naval partnership based in the Middle East led by Cooper.

Port of Guam Receives Port Security Grant, Working with U.S. Coast Guard Toward Increased Resiliency

The Port of Guam as seen from the air in June 2021. *U.S. COAST GUARD*

SANTA RITA, Guam – The Jose D. Leon Guerrero Commercial Port also known as the Port of Guam is among several Western Pacific entities receiving federal grant money through the 2022 Port Security Grant Program (PSGP) to ensure supply chain resiliency within Guam and the Mariana Islands, U.S. Coast Guard Forces Marianas said in a release.

Guam will receive $564,218 from the PSGP. The PSGP is one of four grant programs under the Department of Homeland Security's Federal Emergency Management Agency that focuses on strengthening the nation's critical transportation security infrastructure.

The purpose of the PSGP is to provide the necessary funds for not only state partners but local, territorial and private sector partners to enhance security measures and resilience to critical maritime infrastructure and build threat readiness.

The U.S. Department of Transportation's Maritime Administration also awarded Guam $5.7 million in grants under the America's Marine Highway Program in early October. The Jose D. Leon Guerrero Commercial Port is Guam's only deep-water port and receives about 90% of the island's imports. It offers facilities and services to ships of all registries and is striving to develop into the world-class container terminal port of the Western Pacific Region.

"We're excited for our partners at the Port of Guam, and these awards are very timely. The region we operate in is referred to as the Blue Pacific Continent, highlighting that the ocean connects hundreds of diverse communities," said Capt. Nick Simmons, commander of U.S. Coast Guard Forces Micronesia and the Captain of the Port. "The eyes of the world are focused on this region, and it has never been more obvious how vital our ports are to our way of life – our economic security and prosperity."

The PSGP is vital to maintaining a modernized and secure port supporting the uninterrupted flow of commerce. Regional health, safety, and prosperity inextricably link to the maritime-enabled flow of goods and services, especially realized within the Pacific Islands. This program is one of the ways the U.S. Coast Guard works with private and public sector partners to secure the regional maritime transportation system from disruption, cyber-enabled or otherwise.

"October is cyber security awareness month which can sound vague but requires our attention. We must safeguard our critical infrastructure from all threats, including those in the digital domain. We are adding capacity here in the Sector, including a cyber security expert, capacity crucial to better supporting our regional partners," said Simmons.

At the end of September, members from U.S. Coast Guard Forces Micronesia/Sector Guam, the Government of Guam and industry partners conducted a successful annual full-scale maritime

security training exercise at the port of Guam. This exercise prepares federal, territorial and industry Area Maritime Security Committee partners to respond to security threats affecting Guam's marine transportation system and surrounding critical infrastructure. The scenarios included:

• Simultaneous cyber incidents at several port facilities.
• Coordination of response efforts during an island-wide loss of communications.
• Simulated response to suspected terrorist activity.
• Changes to the maritime security level.
• Establishment of a Unified Command to manage the various response efforts.

"Recently, the Port invited us over to help celebrate their 47th anniversary," said Simmons. "The main event was a coed team tractor-trailer pull for time. There were seven teams, and the Port Police took the first prize. What heartened me the most was to see our Coast Guard members step in to make a difference when a few teams needed another person. It reflects what we know is true out here, this thing only works if we come together as a team to pull it across the finish line."

Textron Systems to Provide Second U.S. ESB with Shipboard UAS Operation

Aerosonde Unmanned Arial Surveillance (UAS) vehicle, Buck G, awaits to launch aboard the Expeditionary Sea-Base USS Hershel “Woody” Williams (ESB 4) in the Atlantic Ocean, Sept. 25, 2020. *U.S. MARINE CORPS / Sgt. Megan Roses*

HUNT VALLEY, Md. – Textron Systems Corporation, a Textron Inc. company, has been awarded a contract valued at up to $22 million by the U.S. Navy’s Naval Air Systems Command (NAVAIR) to provide UAS operational support to the USS Miguel Keith (ESB 5), the company said in an Oct. 20 release. The contract begins in fiscal 2023 and has a total potential performance period of five years. This award builds on the four-year extension of USS Hershel “Woody” Williams (ESB 4) earlier this year and joins two guided-missile destroyers, bringing the total number of U.S. Navy ships supported by the Aerosonde UAS system to four.

Under this contract, Textron Systems will deploy its Aerosonde UAS to provide extended range intelligence, surveillance and reconnaissance (ISR) services with enhanced mission payloads aboard the ESB 5. The company’s Field Service Representatives

will work alongside the sailors onboard to provide support for a variety of maritime missions.

“There are numerous vessels of opportunity with the Navy that can benefit from consistent multi-INT ISR,” said Wayne Prender, senior vice president, Air Systems. “Through this fee-for-service contract, the Navy can continue to mature future shipboard ISR requirements while supporting existing real-world missions. We are already seeing the benefits for DDG- and ESB-class ships, and we continue to optimize our services to deliver the unique operational and logistical capabilities our customers demand in order to accomplish their mission and keep our sailors safe.”

The Aerosonde system has amassed more than 585,000 flight hours while serving multiple U.S. and international allies. It is designed for expeditionary land- and sea-based operations in austere environments and is equipped for multiple payload configurations. For more than 10 years, Textron Systems has provided turnkey, fee-for-service operations, providing hands-on operational support for customers around the world.

Ultra Maritime and UMS SKELDAR to Evaluate UAS-Based ASW Solution

UMS SKELDAR

DARTHMOUTH, CANADA – Ultra Maritime (Ultra) and UMS SKELDAR announced that they have been awarded a 2nd Phase contract under the Department of National Defence's Innovation for Defence Excellence and Security program, which will explore the development of a Rotary Wing UAS to provide an Anti-Submarine Warfare (ASW) sonobuoy dispensing capability, based on the SKELDAR V-200 Uncrewed Aircraft System (UAS).

This innovative program will review how a medium-sized UAS can be used to deploy sonobuoys for the purpose of tracking potentially hostile submarines operating in the open ocean or close to coastal areas that could pose a threat to the Royal Canadian Navy or other forces. Andrew Anderson, chief technology officer, Ultra Sonar Systems, explains: "We are constantly reviewing new technologies to determine how they can be used to tackle the threat from hostile submarines. The scope of this program is to evaluate the technical and operational feasibility of deploying sonobuoys from a Class II Rotary Wing UAS, to provide the warfighter with another tool in the ASW toolbox."

"We are delighted to be a part of this contract with Ultra," adds Richard Hjelmberg, vice president for Business Development for UMS SKELDAR. "Using Rotary Unmanned Aircraft Systems to help conduct ASW will provide many benefits, not least enabling rapid deployment capabilities, a smaller logistical footprint on Canadian Armed Forces ships and a cost-effective alternative to current methods. At UMS, we are

proud of our innovation leadership when it comes to advances in rotary-wing UAS platforms. Our SKELDAR V-200 platform is a prime example of this, with a capability of completing remote automatic flights, exceeding six-hour flight times thanks to the robust heavy fuel engine and the ability to provide a high degree of maintainability and minimum turn-around times. These credentials we believe are the perfect fit for this program.”

The SKELDAR V-200 has advanced intelligence-gathering capabilities when equipped with multiple sensors. Flight times can exceed six hours, and the heavy-fuel engine combined with efficient maintenance procedures and ease of access to the engine compartment allow for highly efficient routine service processes.