



Bayonet Autonomous Underwater Ground Vehicle

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Advances in Untethered Autonomous ROVs showcased at Combined Naval Event

Richmond, Vermont, USA, 17th May 2023- Industry leader in marine robotic software solutions Greensea Systems, Inc. (Greensea) will be showcasing its advances in utilizing artificial intelligence for data collection and evaluation in subsea robotics for defense applications at the flagship naval and maritime exhibition Combined Naval Event, 23 – 25th May 2023 in Farnborough, UK. This is just one element of a wide-ranging spectrum of capabilities of untethered, autonomous ROV operation that Greensea delivers, and will be

discussing during the event.

This military-focused event comes soon after Greensea's successful completion of a demonstration of its untethered autonomous ROV operation utilizing Greensea's Safe C2 remote, over-the-horizon command and control capability, that took place off the coast of San Diego, CA last month.

This technology is being developed under a DIU contract awarded in late 2021 for an Autonomous EOD Maritime Response Vehicles (AEMRV). As part of the contract, Greensea and Seebyte collaborated, pooling their intellect and experience to develop an ROV with integrated Automatic Target Recognition (ATR), to detect and classify objects, in support of EOD missions.

The most recent demonstration included the ROV operating in fully autonomous, untethered mode, to further support underwater defense and security with remotely operated activities of identifying and neutralizing subsea threats, including but not limited to seabed warfare and counter terrorism measures.

EOD Workspace

Greensea successfully conducted a detect and engage mission, powered by OPENSEA Edge, the software solution putting the processing power onto the robotic hardware, reducing the need for data feeds to transition from vehicle to operator. The requirement was to demonstrate the ability to complete an end-to-end mission, including operator mission planning, vehicle launch, search, detection, localization and classification of mine like objects (MLOs).

Latest technology for underwater defense and security includes:

- OPENSEA Edge™; Greensea's open architecture brings true autonomy to marine robotics vehicles. Built on OPENSEA, the standard in open architecture operating systems for ocean robotics, and installed on over 3,000 marine vehicles and systems worldwide, OPENSEA Edge places the computing power closer to the data, to make the exchange to the user more efficient.
- Flexibility and scalability allow for integration with third party

software, as well as scope for additional sensors.

- Effective over-the-horizon communication through Greensea's Safe C2, regardless of bandwidth and latency, allows the ROV operator to be located in any location, whether at sea or on land.
- Tetherless operation is made possible through combining navigation, acoustic modems, over-the-horizon command and control, and onboard power.
- Full ATR libraries for increased perception to enable object detection, identification, and classification.
- EOD Workspace is Greensea's human-machine interface that combines vehicle control and navigation, payload sensors, as well as diagnostics and data management within a single screen, allowing human operators wider situational awareness than they have ever had at their fingertips before.
- The EOD Workspace Simulator provides a powerful training tool to develop and maintain user skills anywhere, at any time, without the cost and logistics of taking a vehicle from its operational activity solely for training purposes.

Greensea is revolutionizing the future of ocean robotics by providing an open architecture platform that enables intelligent autonomy in any marine vehicle. Greensea directly supports several military programs with products, training, and technology development, including Explosive Ordnance Disposal and UXO from deep sea through the surf zone, and Special Operations Forces combat diving.

In addition, representatives will also be able to discuss the exciting new line of vehicles for work in the surf zone. The Bayonet 150, 250 and 350 are amphibious underwater ground vehicles (AUGV). These tracked AUGVs are built on OPENSEA making them easily fitted with a variety of sensors and payloads to accommodate numerous military applications.

Software makes all robotics processes possible.

Greensea will be showcasing the advances in untethered autonomous ROVs and AUGVs on B36 at the Combined Naval Event, 23 – 25th May 2023 in Farnborough, UK.

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Greensea Systems Inc. was founded in 2006 to design and create a commercially available open architecture software platform to break down siloed technology in the subsea environment. The resultant open architecture software, OPENSEA® with its a central library software suite, is the most powerfully integrated control and navigation technology available in the market today that is easy to use, easy to maintain, robust, and portable.

The company works with leading OEMs throughout the world providing the OPENSEA platform on hundreds of installations to the offshore and military industries.

To learn more about Greensea, visit www.greensea.com or call +1.802.434.6080

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