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# VideoRay Announces Unique low-logistics Point Cloud Solution - SubSLAM X2

*Partnership with Vaarst and Greensea allows modeling of undersea assets*

**POTTSTOWN, Pennsylvania, USA** - One of the critical tasks that owners or service companies require is to monitor assets. Frequent inspections are needed to look for damage, growth, or misalignments. The best practice is to generate a real-time point cloud model of the inspected asset. The model lets inspectors make precise measurements and time-lapsed comparisons.

While there are many point cloud generation techniques, the Vaarst solution only requires camera inputs which VideoRay's Defender system captures as it is piloted around the asset – there is no need for positioning or navigation systems typically required to register imagery. SubSLAM X2 is a unique system for Subsea Robotics capable of creating 3D reconstructions while moving simultaneously. It can create mm accurate 3D reconstructions in real-time. This inspection will significantly reduce costs while providing a higher fidelity asset inspection.

Vaarst's solution will also introduce inspection autonomy through their partnership with Greensea. The Defender system will autonomously inspect assets such as monopiles, pipelines, cables, and pilings without the need to pilot it even in harsh, high current environments. Vaarst and Greensea technology will autonomously control the VideoRay Defender system around the asset until it generates a robust point cloud model. Vaarst's Machine Learning will allow operators to teach the system to inspect different assets.

This solution is built on OPENSEA ®, Greensea Systems Inc.'s comprehensive

software platform for developing robotic systems. OPENSEA's fully-distributed, open architecture software framework allows developers and manufacturers the ability to integrate systems across all brands of sensors, devices, and equipment. Its cutting-edge technologies for navigation and autonomy provide operators with a straightforward and intuitive human-machine interface for supervising the vehicles.

Scott Bentley, CEO of VideoRay, explained how this complements existing Defender capabilities: "The Defender is becoming the workhorse vehicle for difficult offshore infrastructure inspections. The ability to generate point cloud information rapidly, without the overhead of positioning and navigation systems, is very exciting for VideoRay and our customers."

Founder and CEO of Greensea Systems Inc. Ben Kinnaman, commented, "We are proud that our software platform OPENSEA is used by VideoRay for its Mission Specialist range of Defender ROVs. The company's vision of creating vehicles prepared for future technology aligns with our own belief that collaboration between vehicle and software is integral to providing intelligence-led solutions in all environments. OPENSEA's open architecture platform goes a long way to future-proofing vehicles that install it, as it provides capability for hardware changes – in this case the addition of Vaarst's SubSLAM X2 system. This ongoing collaboration proves once more that the whole is greater than the sum of the parts and we look forward to working with VideoRay on their next exciting project."

"*We're honoured to be bringing object-based autonomy to the VideoRay platform and we look forward to working alongside Greensea as we implement this step-change in capability. Our 3D vision system creates the world within which the vehicle will navigate autonomously. Bringing this state of the art technology to this compact portable platform will make it easier, faster, cheaper, safer, and far more sustainable to manage and maintain energy and other infrastructure*" remarked Brian Allen – CEO of Vaarst.

**ABOUT Greensea Systems**

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 AUV and ROV environment. The resultant open architecture software, OPENSEA® with its 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](www.greensea.com) or call +1.802.434.6080

**ABOUT Vaarst**

Vaarst enables intelligent data flow from your marine robotics to help drive towards a more sustainable future, protecting people, lowering operating costs and reducing carbon footprint. [www.vaarst.com](www.vaarst.com)

**ABOUT VideoRay**

VideoRay delivered its first ROV system in 2000 and has since become the world's leading manufacturer of underwater, portable, inspection-class ROVs. VideoRay underwater robots help prevent terrorism, find and retrieve objects, inspect infrastructure both inland and offshore, and keep divers safe from hazardous conditions. Operators prefer VideoRay systems because they are optimized for intuitive operation, performance, size, weight, payload and deployment speed. To learn more about VideoRay, visit videoray.com or call at +1 610-458-3000.