



Kraken Conducting Joint Technology Demonstrations with NOAA & ThayerMahan

NOAA Trialing Kraken's KATFISH AquaPix® Sonar and SeaVision® Laser Scanner

ST. JOHN'S, Newfoundland and Labrador, July 22, 2019 -- Kraken Robotics Inc. (TSX-V: PNG) (OTCQB: KRKNF) ("Kraken" or the "Company"), is pleased to announce that since July 18, ThayerMahan and the National Oceanographic and Atmospheric Administration (NOAA) have conducted joint operations using Kraken's sonar and laser scanning technologies. This follows a Cooperative Research and Development Agreement (CRADA) signed between [Kraken and NOAA](#) as well as [Kraken's strategic partnership signed with ThayerMahan](#), both in 2018.

The demonstration is onboard NOAA's ship *Okeanos Explorer* and will conclude on August 1. To learn more about the *Okeanos Explorer* and the missions, visit:

<https://oceanexplorer.noaa.gov/technology/development-partnerships/ex1904/welcome.html>

NOAA Testing New and Emerging Technologies

NOAA's Office of Ocean Exploration and Research (OER) and its partners, will conduct a technology demonstration using Kraken's sonar and laser scanning technologies off the east coast of the United States, from Virginia to Rhode Island, on NOAA's Ship *Okeanos Explorer*. The demonstration will test new and emerging technologies and evaluate how existing technologies could be integrated into NOAA operations. NOAA OER is the only federal program dedicated to exploring our deep ocean and improving our understanding of U.S. deep waters, providing information needed to strengthen the economy, health, and security of our nation. Technology demonstrations are necessary to further the OER objective of mapping and characterizing the U.S. Exclusive Economic Zone by 2030. During the 2019 Technology Demonstration, at-sea and shore-based science teams will work together to explore the potential for new technologies and novel applications to contribute to greater scientific understanding and the exploration of our deep ocean.

Objectives

The primary objectives of this demonstration are to test, integrate, and evaluate emerging and existing technologies for potential use in meeting the data requirements of OER, its partners, and the larger oceanographic research community. The secondary objective of this demonstration is to provide authoritative and actionable data to regional stakeholders. New technologies and novel integrations such as those being tested during this mission are expected to aid and accelerate the fulfillment of the NOAA Office of Ocean Exploration and Research (OER) objective to map and characterize the U.S. Exclusive Economic Zone by 2030. The 2019 Technology Demonstration operations will also include mapping and remotely operated vehicle dives. The expedition, which will take place off the U.S. East Coast, from Virginia to Rhode Island, will be broken into two legs.

Leg 1: July 18 - July 24

Leg 1 operations will include the deployment of a REMUS 600 Autonomous Underwater Vehicle (AUV) in partnership with the NOAA Office of Coast Survey (OCS) and a towed Kraken Robotics KATFISH™ with Synthetic Aperture Sonar in partnership with Kraken Robotics and ThayerMahan, Inc. Targets for testing these systems will focus on the U.S. northeast continental shelf and will include areas with limited bathymetric coverage, Underwater Cultural Heritage sites (UCH), and sites that were identified in the 2013 NOAA report, "[Risk Assessment for Potentially Polluting Wrecks in U.S. Waters](#)". These systems will be deployed in concert with the *Okeanos Explorer's* suite of deep water mapping systems.

Leg 2: July 25 - August 1

During Leg 2, NOAA will test the integration of three technologies with OER's ROV *Deep Discoverer*. These technologies include a 360-degree camera being developed at the Massachusetts Institute of Technology, a One-Way Travel-Time Inverted Ultra-Short Baseline navigation system from the Woods Hole Oceanographic Institution, and a Kraken Robotics SeaVision® 3D underwater laser scanner.

About KATFISH and SeaScout Demonstrations

From July 18 to 24, members from ThayerMahan and Kraken Robotics are conducting joint operations to demonstrate the SeaScout® system with the KATFISH-180 actively stabilized towbody and synthetic aperture sonar payload. Imagery and bathymetric data will be streamed to ThayerMahan's shore-based operations center located in Groton, CT enabling real-time viewing and analysis of survey returns. Targets will focus on the U.S. northeast continental shelf and range from areas with limited bathymetric coverage.

About SeaVision Demonstration

From July 25 to August 1, Kraken's SeaVision® 3D underwater laser scanner will be one of three technologies integrated and trialed with OER's ROV *Deep Discoverer*. ROV dives will target deep water coral and sponge communities and a UCH target that is potentially the USS Baldwin, a U.S. Navy destroyer active during World War II that was intentionally scuttled on June 6, 1961. ROV dives will take place off the coasts of New York, Rhode Island, and Massachusetts.

About Kraken's CRADA with NOAA

In August 2018, Kraken signed a Cooperative Research and Development Agreement (CRADA) with the Office of Ocean Exploration and Research of the National Oceanic and Atmospheric Administration. This partnership explores the application of Kraken's underwater sensor and robotic technologies and systems to NOAA's ocean observation charter in potentially more effective (less expensive, better results, more environmentally friendly) ways. This collaboration is directly responsive to NOAA's Office of Ocean Exploration and Research mission of reducing unknowns in deep-ocean areas and providing high-value environmental intelligence.

As a result of this CRADA, in 2018 a team from the NOAA Office of Ocean Exploration and Research, Kraken Robotics Inc., and the University of Rhode Island Applied History Lab (URI AHL) started a project to image, for the first time, all four of Rhode Island's sunken historic submarines using Kraken's Synthetic Aperture Sonar (SAS) system. During the first phase of the project, three of the four submarines were mapped (the submarines USS G-1, USS L-8, and German U-853), along with the U-853's last World War II victim – a merchant ship called the Black Point.

<https://oceanexplorer.noaa.gov/technology/development-partnerships/18kraken/welcome.html>

ABOUT KRAKEN ROBOTICS INC.

Kraken Robotics Inc. (TSX.V:PNG) (OTCQB: KRKNF) is a marine technology company that is dedicated to the production and sale of software-centric sensors and underwater robotic systems. The company is headquartered in St. John's, Newfoundland with offices in Dartmouth, Nova Scotia; Toronto, Ontario; Bremen & Rostock, Germany; and Boston, Massachusetts. Kraken is ranked as a Top 100 marine technology company by Marine Technology Reporter. For more information, please visit www.krakenrobotics.com, www.krakenrobotik.de, www.krakenpower.de. Find us on social media on Twitter (@krakenrobotics), Facebook (@krakenroboticsinc) and LinkedIn.

This news release contains forward-looking information. Often, but not always, forward-looking information can be identified by the use of words such as "plans", "expects" or "does not expect", "is expected", "estimates", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved. Forward-looking information involves known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of Kraken or its subsidiaries and customers to be materially different from any future results, performance or achievements expressed or implied by the forward-looking information contained in this news release. Risks, uncertainties and other factors involved with forward-looking information could cause actual events, results, performance, prospects and opportunities to differ materially from those expressed or implied by such forward-looking information including such risks contained in the Company's management's discussion and analysis for the fiscal year ended December 31, 2018 and filed with Canadian securities regulators available on the Company's issuer profile on SEDAR at www.sedar.com. Although the Company believes that the assumptions and factors used in preparing the forward-looking information in this news release are reasonable, undue reliance should not be placed on such information and no assurance can be given that such events will occur in the disclosed time frames or at all.

The forward-looking information included in this news release are made as of the date of this news release and the Company does not undertake an obligation to publicly update such forward-looking information to reflect new information, subsequent events or otherwise unless required by applicable securities legislation. The reader should not place undue importance on forward-looking information and should not rely upon this information as of any other date. All forward-looking information contained in this press release is expressly qualified in its entirety by this cautionary statement.

Neither the TSX Venture Exchange Inc. nor its Regulation Services Provide (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release, and the TSX Venture Exchange has neither approved nor disapproved the contents of this press release.

For further information, please contact:

Joe MacKay, Chief Financial Officer
(416) 303-0605
jmackay@krakenrobotics.com

Greg Reid, Chief Operating Officer
(416) 818-9822
greid@krakenrobotics.com

Sean Peasgood, Investor Relations
(647) 955-1274
sean@sophiccapital.com

Glenda Leyte, Marketing Manager
(709) 757-5757 extension 288

