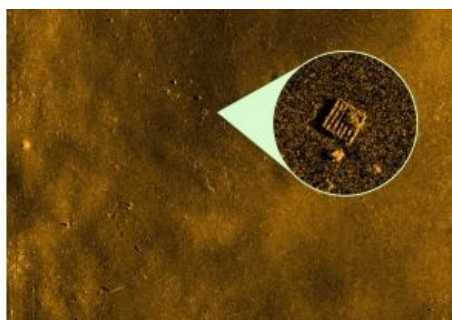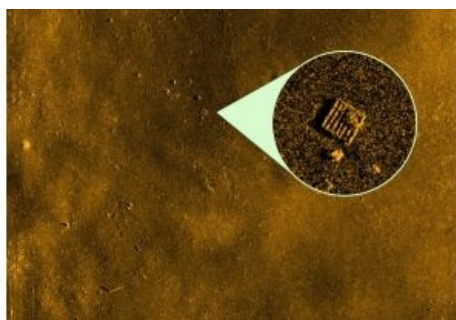# Kongsberg Discovery launches SAS Target Assistant with Cathx Ocean's Clarity software

Kongsberg Discovery has unveiled a new analysis tool, developed in collaboration with underwater imaging specialist Cathx Ocean. This innovative tool significantly streamlines the process of detecting and classifying objects of interest in seabed surveys conducted by Kongsberg's top-of-the-line HUGIN autonomous underwater vehicles (AUVs). By doing so, it cuts costs for survey operators and allows them to allocate resources more efficiently towards critical tasks.

Kongsberg HISAS scans of the seafloor contain extensive visual information that requires a highly trained eye to manually detect objects of interest. This time-consuming process ties up valuable resources in sonar image analysis. Automating the object identification process using the novel SAS Target Assistant provides major workflow benefits in terms of earlier decision-making. The application runs in the background, providing consistent and reliable detection and leaving users to focus their mental capacity on the most valuable task of evaluating and classifying the potential objects of interest.

Automating tedious tasks with algorithms

"In conventional survey analysis, the operator has to laboriously play through the scanned image data, tagging then measuring and classifying objects of interest and, finally, building a target list that can be exported. SAS Target Assistant automatically detects and measures objects of interest and creates a target list for review/confirmation, further analysis and export," said Adrian Boyle, CEO of Cathx Ocean.

The tool allows users to predefine the desired characteristics (size and shape of objects) they require to rapidly identify targets matching such specifications. "Leaving the tedious work of initial scanning to the algorithm frees up human personnel to concentrate on more complex, high-value analysis tasks while speeding up the delivery of survey results. With longer-duration AUV missions, as well as increases in the area and frequency of surveys being asked of AUV operators, time literally is money," Boyle added.

SAS Target Assistant requires no additional window or display/monitor, as it is fully integrated into the Reflection PMA system. "It's a great example of how machine learning and sensor intelligence can be used to simplify often demanding workflows, reducing the burden on human operators while also producing reliable results according to survey specifications and deadlines," Sigurd Fjerdingen, vice president products at Kongsberg Discovery, said.

HUGIN AUVs have been successfully deployed for commercial surveys and defence operations worldwide in both shallow and deep water in marine environments ranging from polar to tropical. The partnership with Cathx Ocean aims to change how these AUV surveys are performed today and into the future. The collaboration serves as a blueprint for further co-development initiatives to enhance the HUGIN Open Data Processing ecosystem. "Working with specialist partners is the most efficient way to develop new robust applications that cater to ever-evolving market requirements. By introducing SAS Target Assistant, we can supercharge survey analysis for customers while reinforcing the exemplary operational record of HUGIN vehicles over the last quarter century," Fjerdingen concluded.

HISAS imagery with objects on the seafloor. (Image courtesy: Kongsberg Discovery)

https://www.hydro-international.com/content/news/kongsberg-discovery-launches-sas-target-assistant-with-cathx-ocean-s-clarity-software