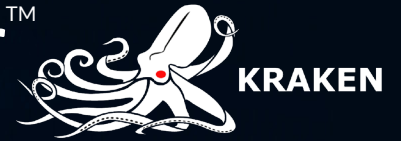


Sub-Bottom Imager™



See Beneath the Seabed

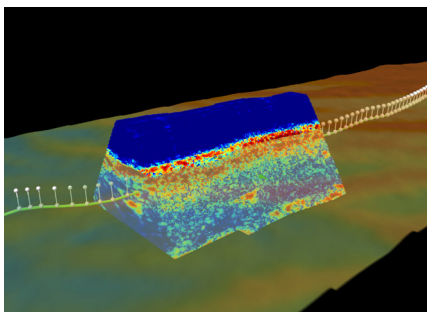
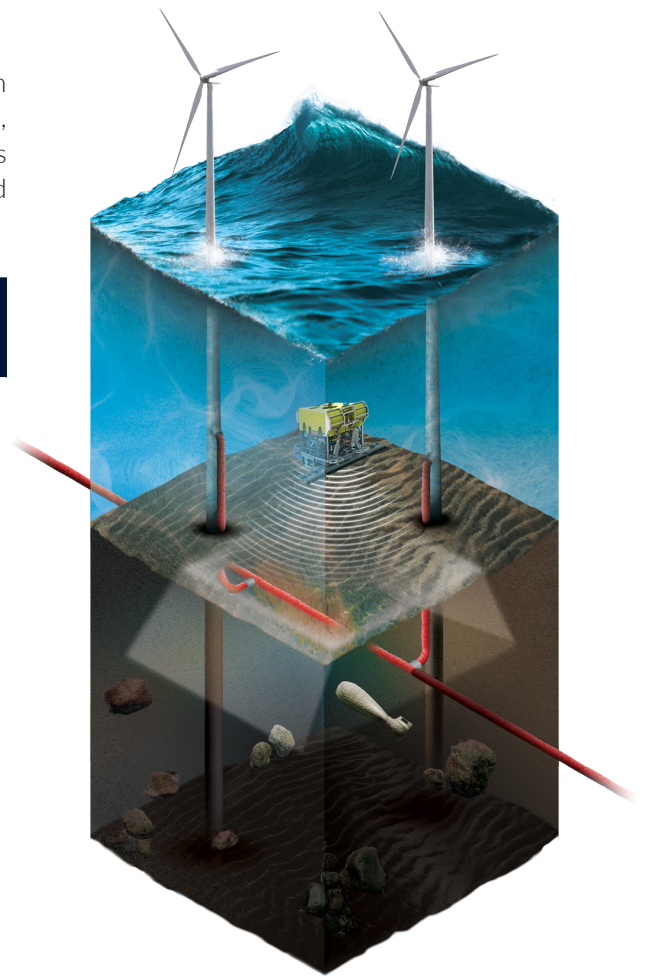
The Sub-Bottom Imager™ (SBI) uses state-of-the-art beamforming SAS arrays, providing a real-time 3D view of the sub-seabed. The SBI identifies buried objects, anomalies, geohazards, and stratigraphy.

The SBI acquires data in a continuous 3D acoustic swath, a minimum of 5 m wide (at the seabed) and penetrating to 5 m below the seabed, over 1.5 m beyond our competitors' limitations. The SBI's applications include depth of burial, out of straightness, debris locations, unexploded ordnance, and decommissioning surveys.

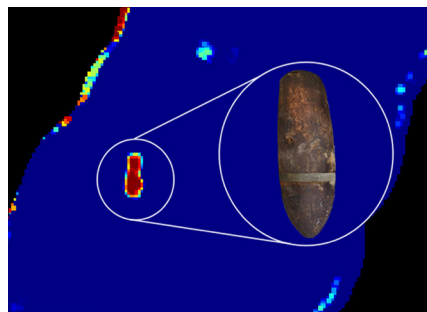
Features

- Identifying size, shape and orientation of buried objects (i.e., boulders, UXOs)
- Ability to image ferrous/non-ferrous hazards
- Identifying energized cables both AC/DC cables detection
- Reducing pUXO magnetometer targets by 70%

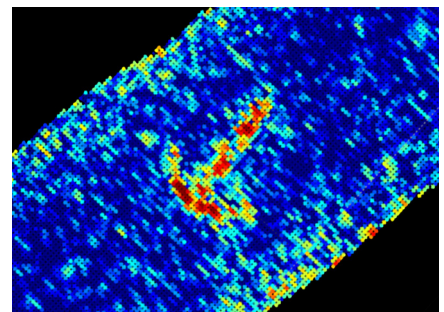
The SBI deploys on multiple platforms and accommodates work and inspection class ROVs, towed as our SeaKite ROTV and, for shallow water operations, our GeoArm and GeoLink work in waters under 10m.



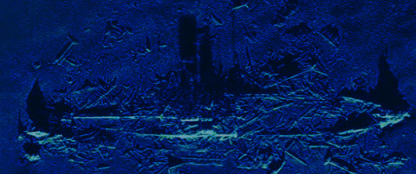
3D volumetric data set - one line gives 5 m swath of coverage at the seabed



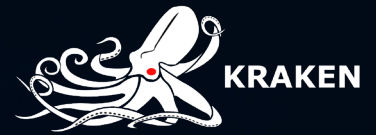
UXO identified 4 m sub-seabed, beyond reach of traditional surveys



SBI data located buried anchor along with other anomalies/boulders

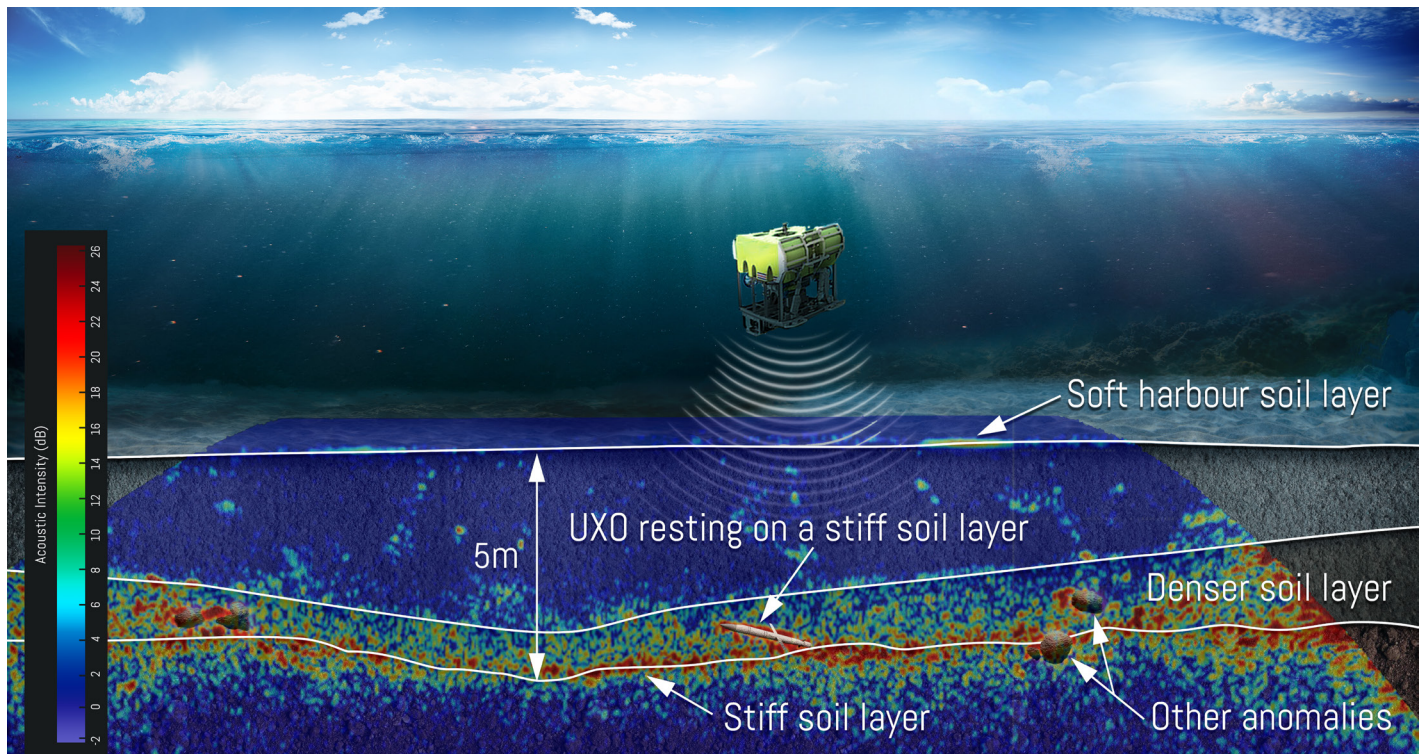
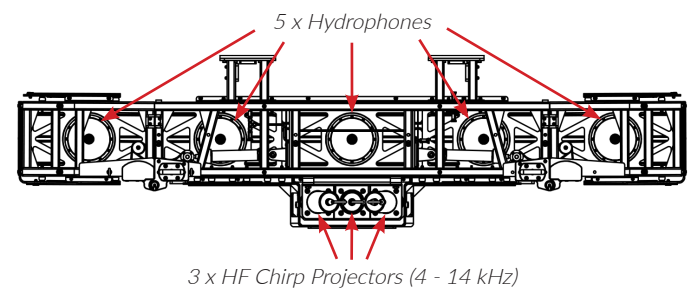
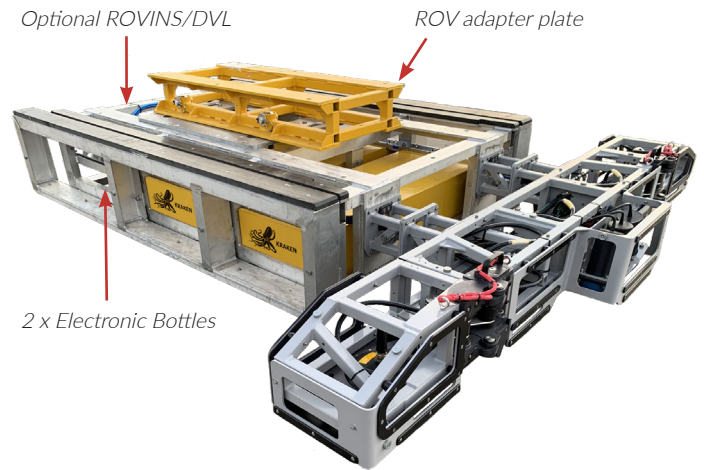


Sub-Bottom Imager™



Sub-Bottom Imager™ Specifications

Operational Depth	3 m to 500 m
Survey Speed	Up to 4 kn
Swath Width	Minimum 5 m
Penetration Depth	5 m
Accuracy	± 10 cm
Survey Height (Off Seabed)	3.5 m ± 0.5 m
Power Requirements	115 VAC, 50/60 Hz
Hydraulic Requirements	2 JIC4 Port @ 1200 psi
Communication Link	1000 Base-T 1 GB Ethernet
ROV Interfaces	Work Class/Lighter ROVs
Data Acquisition Software	SBI Pilot Console
Processing & Visual Software	EIVA NaviModel Producer
Auxiliary Sensors	INS/DVL, Sound Velocity Probe/Depth Sensor



Visual representation of an actual buried UXO, with graphic overlay, located by the SBI. Previously undetected by magnetometry and sub-bottom profiler. SBI data imagery as seen in a real-time vertical slice.

