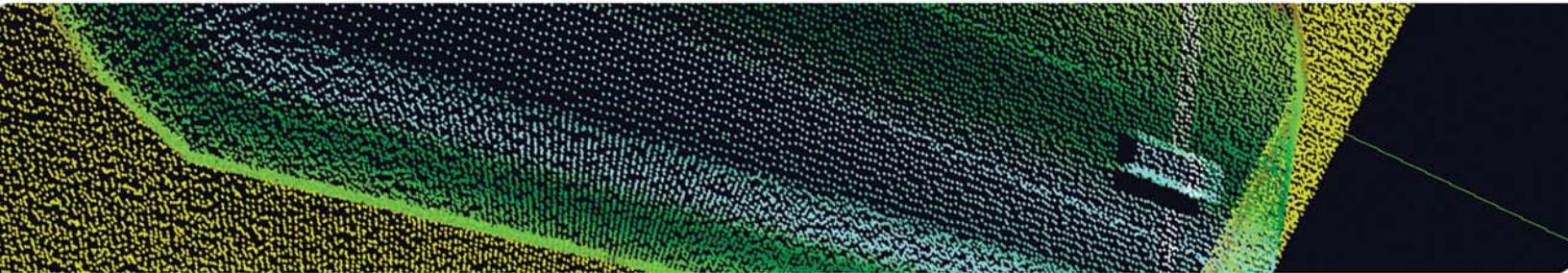




# HullSweep

**Hull Scanning Software for Harbor Security Applications**



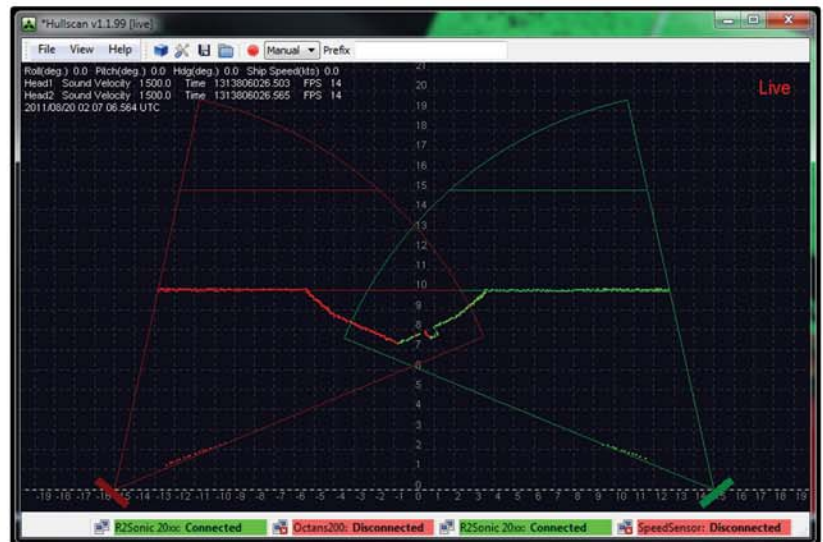
Real-time Hull Inspections

Hazard Detection

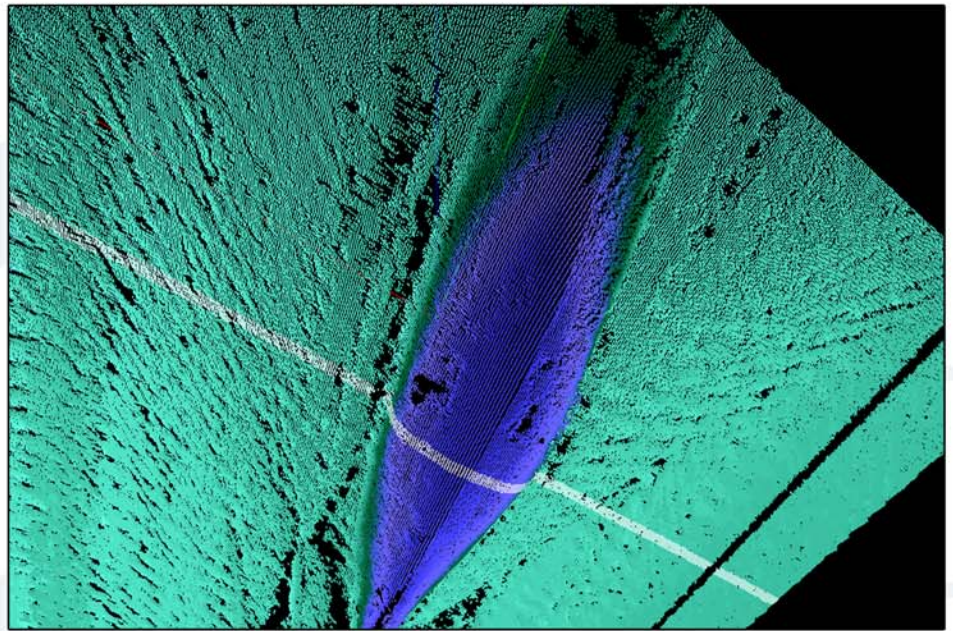
Port & Harbor Security

Threat Minimization

HullSweep has been designed to control and synthesize real-time data from two R2Sonic 2024 multibeam echosounders that are inverted (pointing upward) and mounted on the bottom of a channel. With the sonar heads pinging, vessels that travel over and between the two sonar heads are scanned, thus producing a 3D model of the vessel's hull. HullSweep interfaces with and controls the two R2Sonic heads, while simultaneously receiving inputs from sound velocimeters, motion sensors and a vessel speed sensor. In addition to the data acquisition module, HullSweep also comes with a 3D Editor that allows users to clean up the data, take measurements of hull and "feature" dimensions, analyze anomalies, and output a 3D model of the hull.



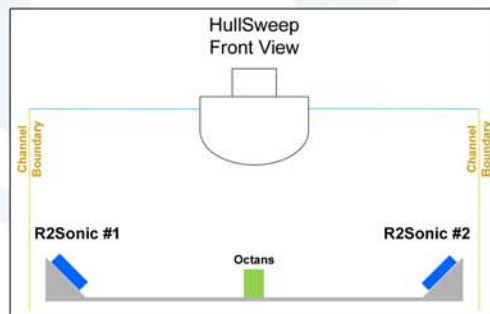
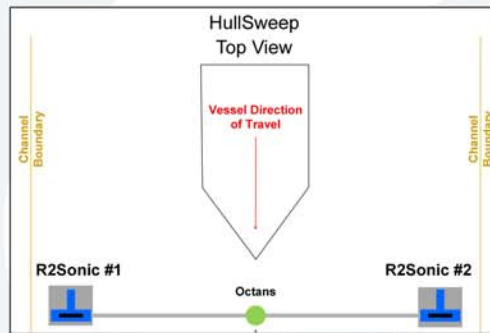
Based on input from harbor security professionals, OIC sought to develop a hull scanning solution that provides advanced threat detection capabilities while minimizing vessel traffic disruptions. The result is HullSweep, a software platform that bundles robust and state of the art capabilities in an easy-to-use interface. Hull scanning stations can be built directly in existing transit corridors to passively scan all incoming or outgoing vessel traffic. HullSweep operators can rapidly process and analyze the acquired data, and output the results to a xyz ascii file or HTML report.



### Sonar Controls

Unique capabilities of the R2Sonic 2024 MBES, such as a rotatable and adjustable width sector, make it an ideal system for hull scanning applications. The HullSweep software allows operators to control the following sonar parameters:

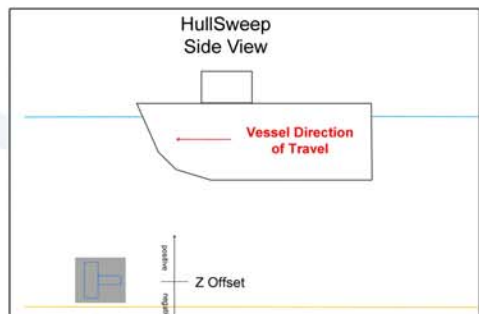
- Range
- Pulse Length
- Power
- Gain
- Field of View
- Sector Rotation
- Depth Gates
- Frequency



### System Components

The hull scanning system components include two of each of the following:

- R2Sonic 2024 MBES systems
- Octans Motion Sensor (optional)
- Valeport MiniSVS
- GPS



### Oceanic Imaging Consultants, Inc.

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