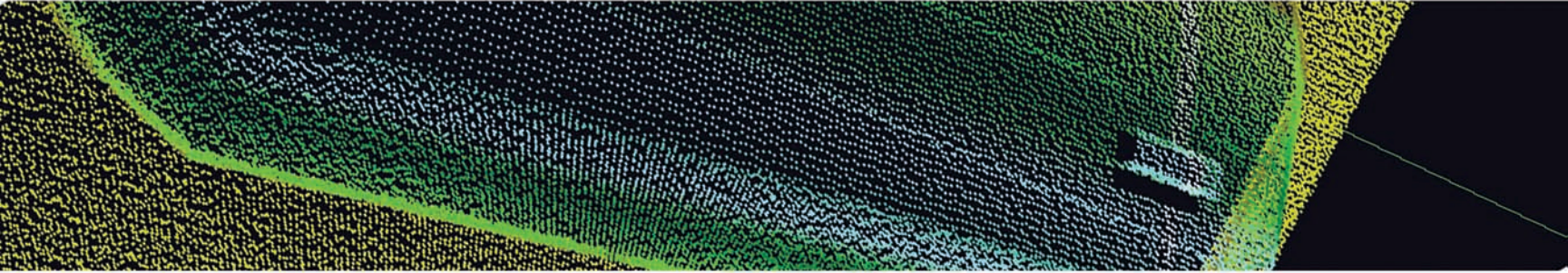# HullSweep

Hull Scanning Software for Harbor Security Applications
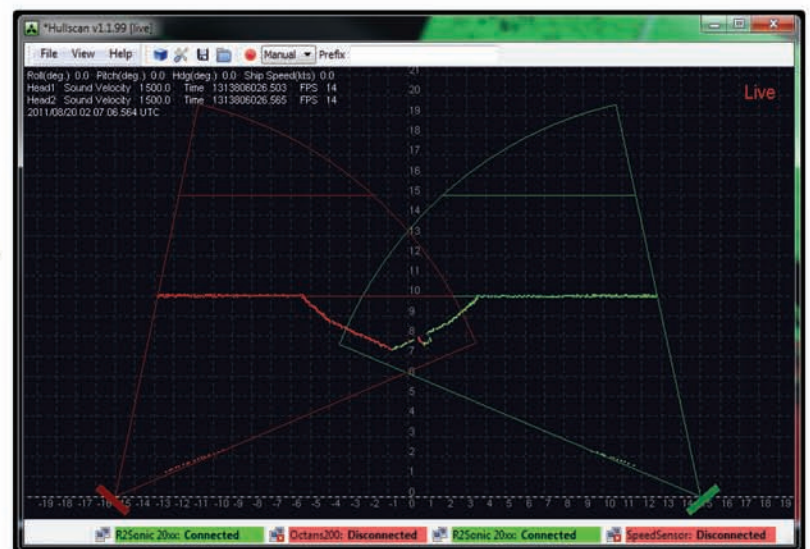
Real Time Hull Inspection

Hazard Detection
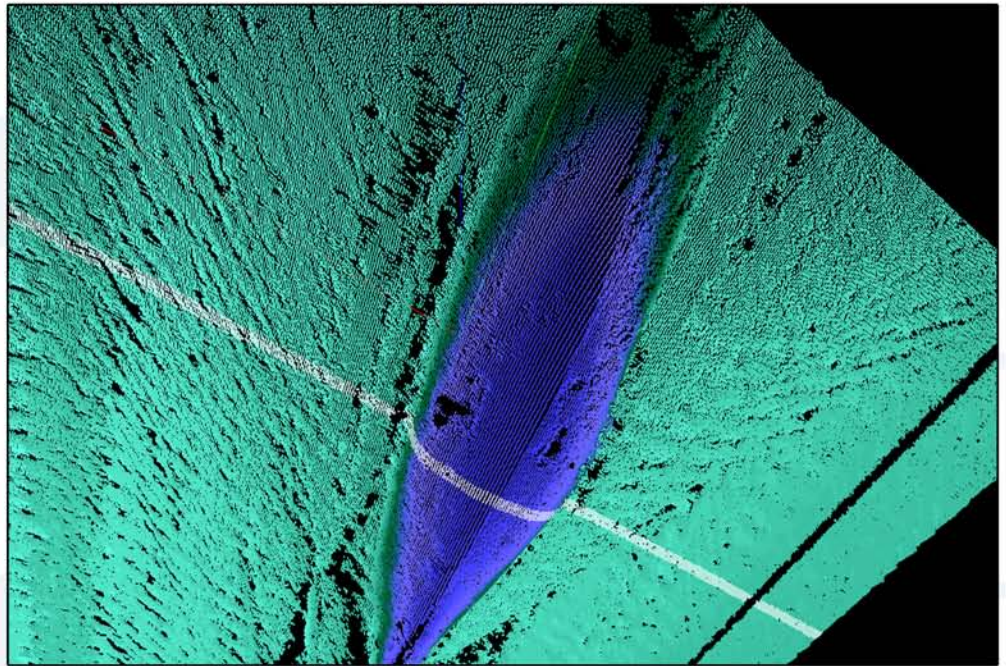
Port and Harbor Security

Threat Minimization

HullSweep is an in-water, real time vessel hull imaging system that controls and integrates real time data from two multibeam echo sounders that are inverted (pointed 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 multibeam heads, while simultaneously receiving inputs from sound velocimeters, motion sensors, and a vessel speed sensor. In addition to the data acquisition module, HullSweep provides a 3D editor that allows users to clean data, take measurements of hull and "feature" dimensions, analyze anomalies, and output a 3D model of the hull.

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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.
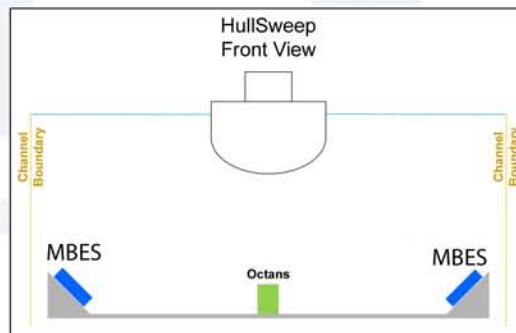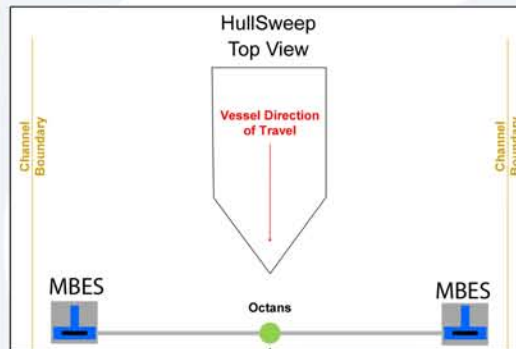
Hull scanning stations can be built directly into existing transit corridors to scan all incoming or outgoing vessel traffic. HullSweep operators can rapidly process and analyze the acquired data, and output the results to an xyz ASCII file or an HTML report.

Sonar Controls

Unique capabilities of HullSweep software support MBES with a rotatable and adjustable width sector, making it an ideal system for hull scanning applications. HullSweep allows operators to control the following sonar parameters:
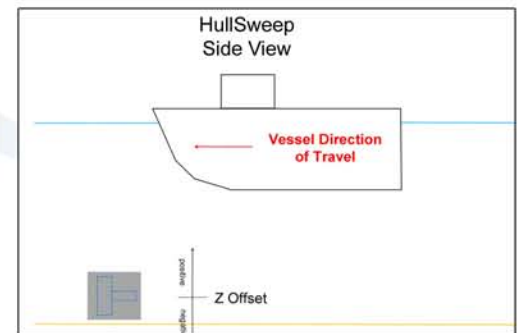
- Range
- Pulse Length
- Power
- Gain
- Field of View
- Sector Rotation
- Depth Gates
- Frequency

HullSweep Top View

Channel Boundary

Vessel Direction of Travel

MBES

Octans

MBES

Channel Boundary

HullSweep Front View

Channel Boundary

MBES

Octans

MBES

Channel Boundary

HullSweep Side View

Vessel Direction of Travel

Z Offset

System Components

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

- MBES Systems
- Octans Motion Sensor (optional)
- Valeport MiniSVS
- GPS

Oceanic Imaging Consultants, Inc.

Founded in 1993, OIC provides seafloor mapping software, systems and services to the world's military, government, commercial, and academic markets. With a solid understanding of the requirements of the hydrographic community and an emphasis on providing quality customer support, OIC should be your first stop for all of your seafloor mapping needs.