The New Vision Sensor for Safe Navigation.

SEA MACHINES

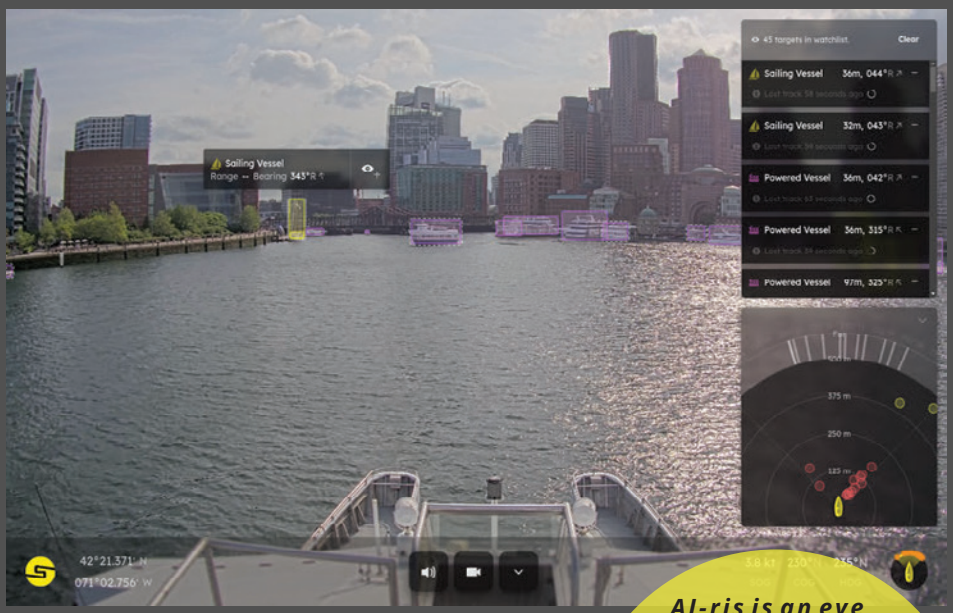
AI-ris

ALL-SEEING FOR THE ALL-SEAING

Safe piloting is never easy. Vessels operate in an active mixed-use domain where over 99% of the water area is without lanes. Obstacles can emerge from any direction meaning that the safe pilot must always be alert and continuously scanning the waters. It's tiring. Fatigue and tedium cause perception-complacency which can lead to an accident.

USCG Boating Accident Data, Year 2020

The marine industry has an accident rate per operational hour that exceeds all other major machine-transiting modalities. In recreational boating, 36% of these are caused by vessels striking other vessels or objects while under power.



***AI-ris is an eye**, like your own but digital, constantly looking out for you while underway. Enhancing the safety and ease of vessel piloting on a scale not seen since the introduction of GPS.*

Primary accident types ▾

36.5%	*Collisions & Allisions*
11.1%	*Flooding and swamping*
9.2%	*Grounding*
6.4%	*Falls overboard*

▾ Top contributing factors

- *Operator Inattention* **12.6%**
- **11.6%** *Operator Inexperience*
- *Improper Lookout* **11%**
- *Excessive Speed* **7.8%**

AI-ris KNOWS WHAT IT SEES

Vessels

Navigation Buoys and markers

Windmills and other manmade objects

Whales and marine mammals

Powered by artificial intelligence, AI-ris holds the power of deep learning to detect 10 objects commonly found at the water's surface.
The neural-networked mind of the AI-ris will also detect and report many uncommonly seen objects which you may need to know about.

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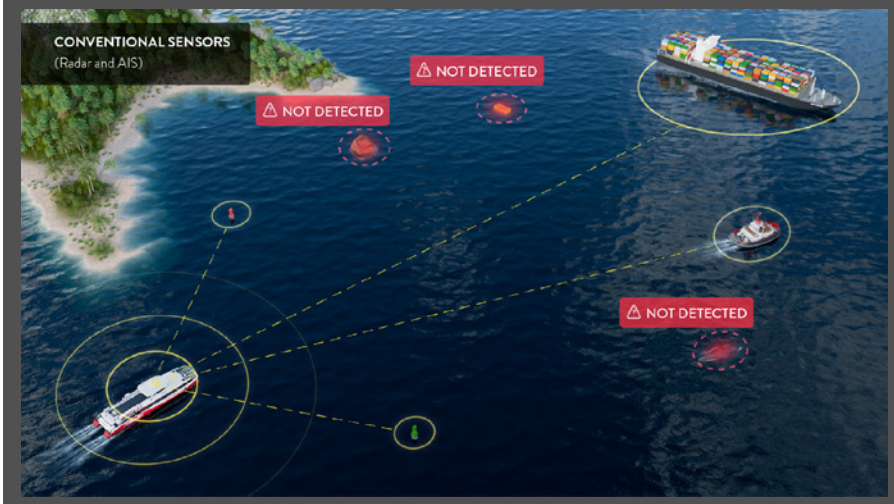
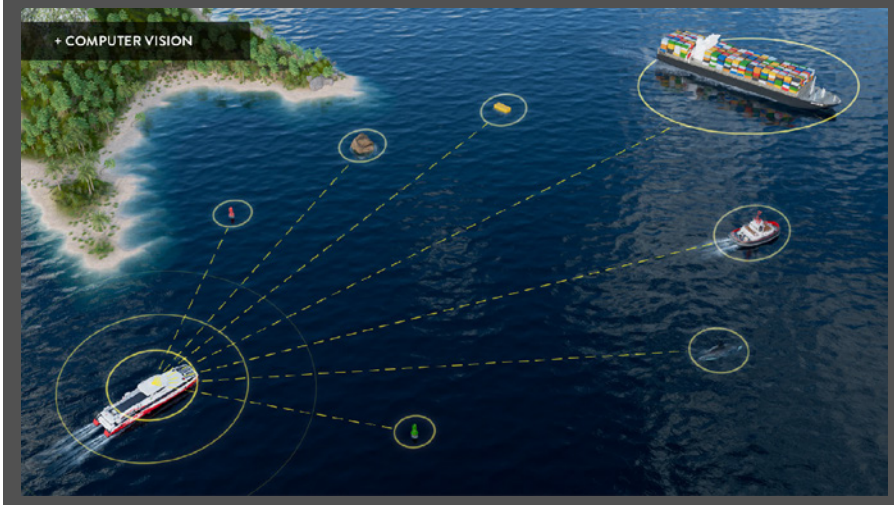
Fills an Instrumentation Gap

While marine radars can be good for identifying dense objects at a distance or under low visibility, the AI-ris vision sensor is better at automatically detecting and reporting all objects that are close in.





Close-in is what counts

Distant objects are good to know but most vessel collisions and allisions happen when close-in objects are missed or not understood. AI-ris is always on watch and makes safe piloting easier.

Reduces Fatigue and Improves Operations

Shifting the workload from the human eyes to AI-ris reduces mental effort of the pilot, which decreases human fatigue enabling safer and increased hours of confident operations.

One AI-ris versus multiple Humans

The AI-ris sees and reports all nearby objects by continuously analyzing an area that comparatively would requires multiple sets of focused, undistracted, and valert human eyes. One human can focus on a 30 degree slice of horizontal area at any instance, compared to AI-ris' coverage of 90 degrees in the first release and 360 in an upcoming iteration.

THE POWER OF AI-ris

Visually detects and tracks all on water objects ("targets") both fixed and floating

Classifies targets into 1 of 10 object types or as unknown

Assigns an ID to each target

Calculates range and bearing of each target

Enables guard zone radius and alert if target enters guard zone

Streams UI wirelessly to any HTML capable device

Outputs targets as NMEA TTM string for input into other systems

Provides video record for training and forensics

Over the air connectivity for software updates

Put AI-ris to work for you. Available in Q3 2022.

Sea Machines: See all, Sea Better

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