



SophyAI Sentinel

A SophyAI® application for shipboard safety and collision avoidance

Powered by our patented
SophyAI Platform

Patent N. 102018000009442



What is SophyAI Sentinel

- SophyAI Sentinel is a derivation of our A.I. platform that can act as a careful overseer of what is happening on and around a ship.
- The system is based on three integrated modules that allow, through a combined vision system, to interpret the scenario intelligently, conspicuously complementing the human observation function but with the peculiarity of being able to interpret the scene h24



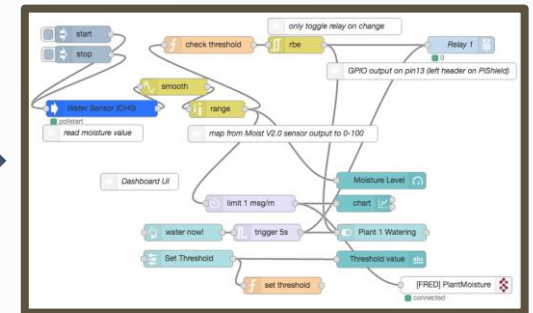
Day Light cameras
Radiometric Camera
Lidar



Neural Network
Recognition Module



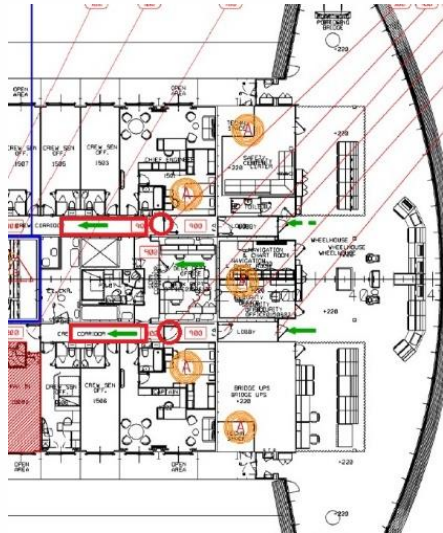
Geolocalization and
Digital Twin Module



Workflow Module

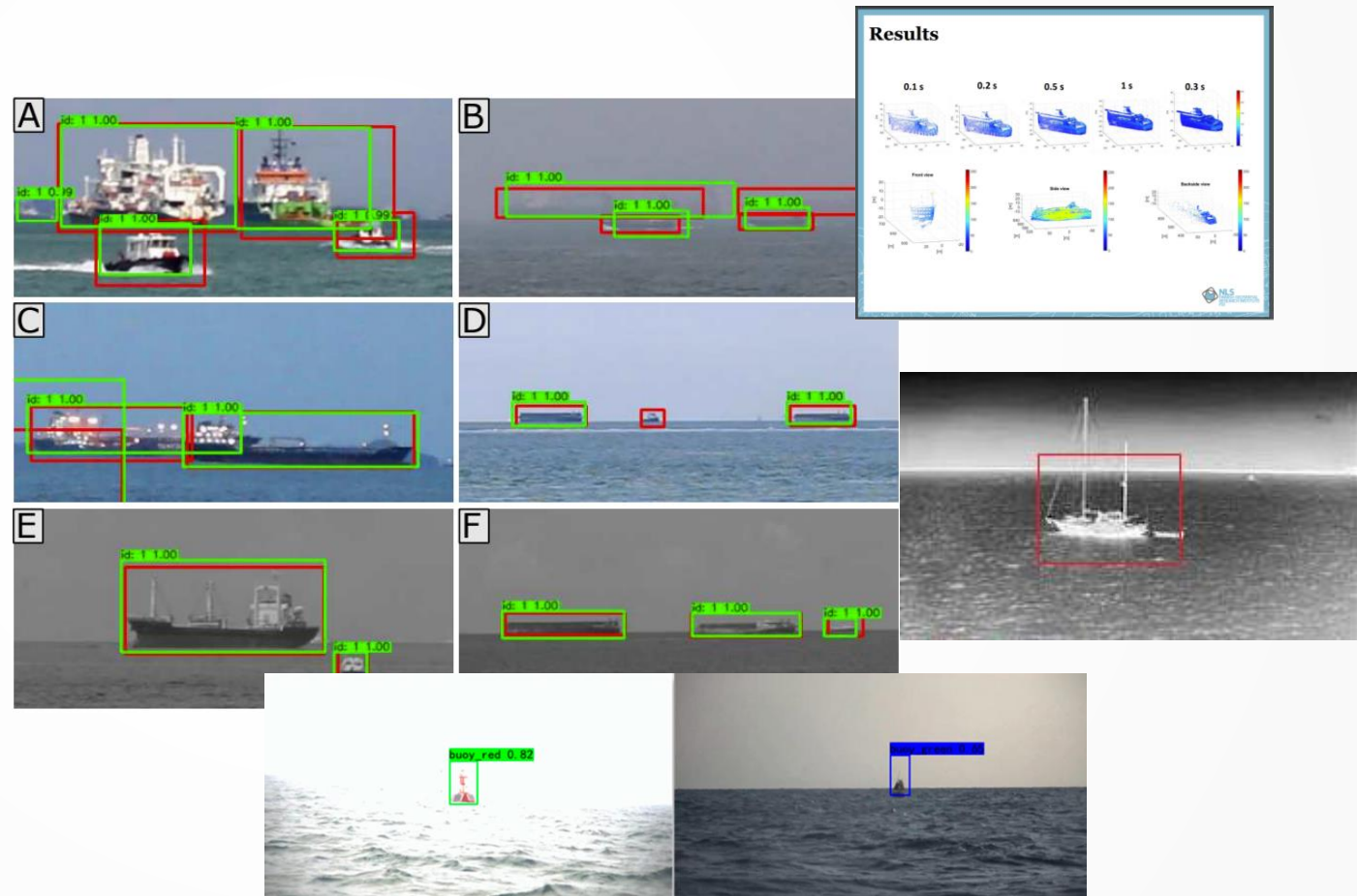
SophyAI Sentinel for on-board control.

- **SophyAI Sentinel** automatically intervenes in case of recognized predetermined events. (Access, PPE, Man Down, Presence in interdicted areas).
- This is done by recognizing observed "objects" (whether people or vessels), geolocating them, and representing them in Digital Twin on the ship's plan or on a map.
- Based on precise instructions entered into its workflow module, it adopts predetermined rules that can generate communications, alerts or actuations.



SophyAI Sentinel for anti-collision control

- **SophyAI Sentinel**, through its sensors, is able to recognize different types of vessels both during the day and at night.
- Vessels are recognized by the neural network at sufficient distances to enable maneuvers to avoid collision.
- **SophyAI Sentinel's** flexibility to use different algorithms and recognition classes allows it to "recognize", through training, not only boats but also buoys and fixed structures.



Sensors Data Fusion and customizable Workflow



- IP day-light cameras
- Radiometric camera
- LIDAR
- RTK GPS

- Data fusion between the different sensors
- Integration with on board radar and AIS information

Workflow

- Anticollision between vessels, buoys and fixed structure
- On-board control for crew safety
 - Man.down
 - Person in non authorized areas
 - PPE's check