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# SEA-EYE UNMANNED SURFACE VEHICLE

Patent No.: PI 2014700946



## PRODUCT DESCRIPTION

Sea-Eye is an Unmanned Surface Vehicle (USV), for sea surveillance and monitoring applications. It is equipped with dual day and night vision cameras for simultaneous under and over the sea vision, sonar system for underwater mines sweeping, target acquisition system, GPS and IMUs for autonomous navigation. Besides that, Sea-Eye revolutionizes the design of traditional USV with a **Anti-Capsize** system, that enables the boat to operate normally even if it capsizes in rough sea conditions.

## INVENTION ADVANTAGES

- Anti-capsize system
- Day and night vision system
- Ground controller with user friendly GUI
- Solar powered
- Autonomous path planning and navigation system

## NOVELTIES

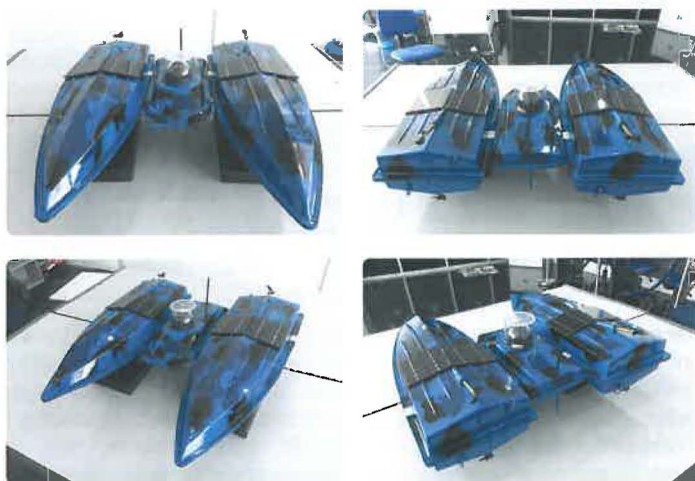
- Target acquisition and tracking system
- Dual day and night vision system
- Simultaneous under and over the sea vision
- Anti-capsize system
- Control Methods
  - Autonomous using GPS
  - Manual using Remote Control

## APPLICATIONS

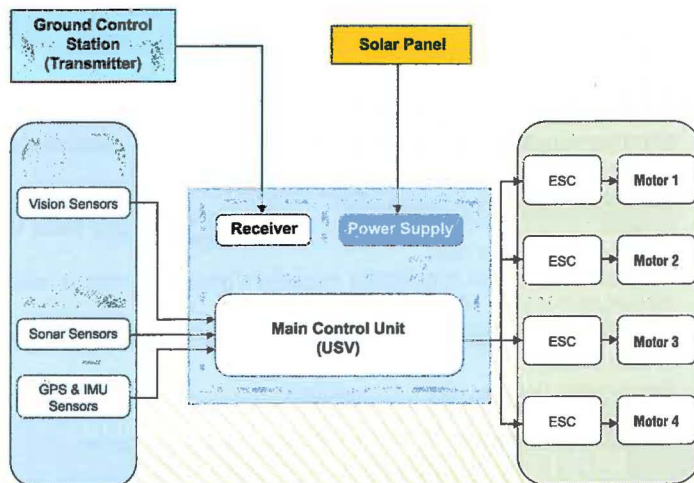
- Coast Patrolling
- Oil rigs monitoring
- Port & harbour protection
- Search and rescue
- ISR Missions
- Strategic facility protection

## COMMERCIAL POTENTIALS

- Oil rigs companies
- Port and harbor department
- Malaysian Navy
- Malaysian Maritime Enforcement Agency (MMEA)
- Fishery



### SYSTEM ARCHITECTURE



**PUBLICATIONS**

- Development of robust anti-capsize marine vehicle for perturbed sea environmental (Submit in Robotics journal [Scopus with ISI IF 1.3])
- New hybrid rigid controller design for anti-capsizing system of Unmanned Surface Vehicle (Submitted in Acta Polytechnica [Scopus with ISI IF 0.63])