



## ECA Group receives the Innovation Trophy at the Euronaval tradeshow for “STERNA”, an application for the UAV IT180 unmanned aerial vehicle (UAV) in the naval defence sector

Jean-Yves Le Drian, French minister of Defence, awarded the Innovation Trophy this morning to ECA Group during the inauguration of the Euronaval tradeshow for their patent baptized [STERNA®](#). This patent combines the use of an UAV (for example, the [UAV IT180](#)) and a magnetic sensor carried by the drone to measure a ship’s magnetism.

This patent is the fruit of a joint effort between ECA Group and EOST (Ecole et Observatoire des Sciences de la Terre), the French School and Observatory for Earth Sciences, in the scope of a partnership related to magnetism in the naval sector.

The IT180 drone is a mini rotary-wing UAV that can be easily operated from any ship due to its compact size and its high-accuracy navigation even in strong winds. Moreover, it can be configured to operate in a tethered version ([UAV IT180-999](#)) to act as a radio relay or to detect drifting mines, for example.

The innovation rewarded today by this trophy consists in having this drone carry a magnetic sensor able to measure a ship’s magnetism while performing an aerial survey by a drone. Having a low magnetic signature is essential for these ships in order to avoid exploding on mines able to detect a magnetic mass. Measuring a ship’s magnetism is therefore important as it enables the adjustment of onboard compensation systems in order to modify its magnetism to the lowest possible values.

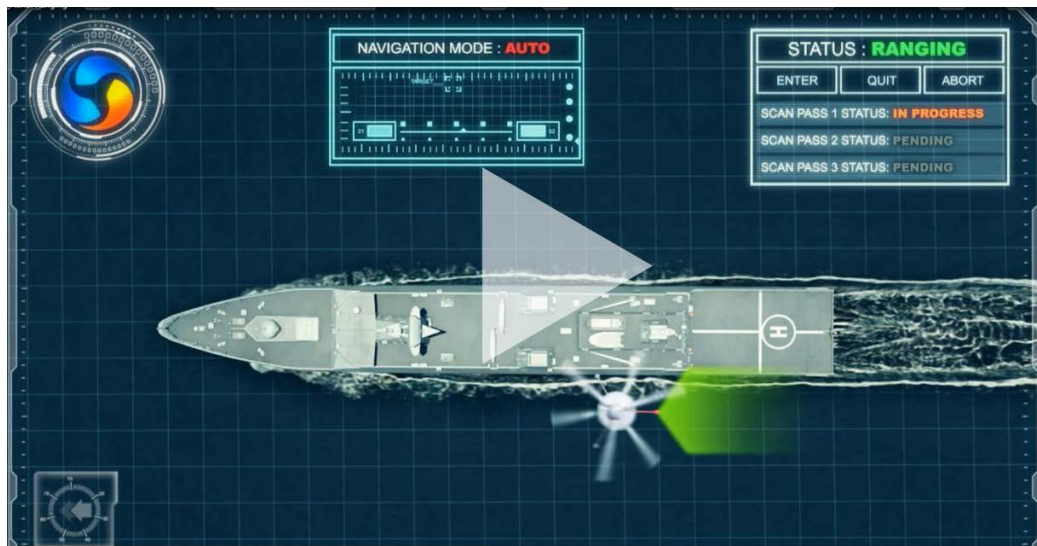
Using this innovation, any vessel equipped with an UAV IT180 will be able to verify and periodically adjust its magnetism as often as possible while today this is only possible at submarine bases which are often a fixed or permanent facility.



This innovation is rooted in a multi-task approach of the IT180 in the naval sector. Any ship can accommodate the IT180 as a technical tool capable of performing various tasks serving the ship's crew or its mission:

- Interception of suspicious vessels;
- Detection of drifting mines;
- Measure a ship's magnetism;
- Radar calibration;
- Radio relay for communications with aerial or surface drones;
- Recovery of data from underwater drones (DRONECOM patent);
- Coastal (land) surveillance.

Watch our video: [https://www.youtube.com/watch?v=G\\_9mqCwp-WM](https://www.youtube.com/watch?v=G_9mqCwp-WM)



The UAV IT180 and its applications for the naval sector are presented this week at the 2016 Euronaval tradeshow at ECA Group's booth: **H73-F70**.

A conference dedicated to the STERNA® solution will be held October 18th at 14:30 at ECA Group's booth.

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ECA Group will also hold numerous conferences on the following themes:

**Tuesday, October 18**

14:30 – 14:50

STERNA®: a unique aerial and patented portable magnetic measurement solution

15:00 – 15:20

Towed and remotely-controlled platforms for mine-sweeping

15:30 – 15:50

How to successfully conduct mine-warfare operations using a portable unmanned mine-counter-measure system (UMS) and its software suite

16:00 – 16:20

Multi-influence range solutions for protecting ships

16:30 – 16:50

Naval training simulators: How to prepare for confronting dangerous situations at sea

**Wednesday, October 19**

15:30 – 15:50

Using remotely-operated vehicles (ROVs) to recover test torpedoes

16:00 – 16:20

The benefits of using silicon carbide (SiC) technology for applications onboard submarines

16:30 – 16:50

A modular drone kit used to easily transform an ordinary boat into an unmanned surface vehicle (USV)

## **Thursday, October 20**

14:00 – 14:20

ROV missions on shipwrecks at depths between 100 and 2000 meters: identification, assessment and recovery

14:30 – 14:50

Detecting mines in shallow water using the Inspector USV, equipped with bow- and stern-mounted sonar

15:00 – 15:20

A18-D: a compact AUV for inspections in shallow water

15:30 – 15:50

Port and coastal protection: USV and UAV – highly-effective solutions for use individually or in combination with traditional solutions

16:00 – 16:20

A full range of simulation solutions designed to improve the effectiveness of naval forces at sea

## **Euronaval workshop**

### **Wednesday, October 19**

14:45 – 15:30

From the PAP104 to drone systems: towards a new concept of mine-warfare? - Squadron vice-admiral (2S) Christian CANOVA, FRN, Defense and Operations Advisor - ECA Group

### **Thursday, October 20**

14:45 – 15:30

The UAV, an essential tool for any vessel

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### ECA Group

The ECA Group is renowned for its expertise in robotics, automated systems, simulation and industrial processes. Ever since 1936 it has been developing complete innovative technological solutions to perform complex missions in hostile or restrictive environments.

Its products are used by a demanding international clientèle requiring the highest levels of safety and efficiency, mainly in the sectors of defence, maritime, aerospace, simulation, energy and industrial equipment.

In 2015, the Group reported revenue of 105.2 M€ for its three Departments: Robotics, Aerospace and Simulation.

ECA Group is a Groupe Gorgé company.

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