ECA GROUP
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Toulon, June 24th 2020

ECA GROUP to detect buried sea mines – always moving one step ahead in naval mine countermeasures

ECA GROUP and SOACSY recently signed a licensing agreement giving ECA GROUP exclusive rights to exploit its developments using seaCHIRP® technology based on SAS (Synthetic Aperture Sonar) for the detection of buried naval mines.

Naval mines are a real threat for seafarers and a navy's daily concern. They have various forms and can be either visible on the surface (moored or floating mines) or detectable underwater as bottom mines. Underwater mines can get buried by waves and currents in sandy bottoms or by impact in muddy soil. As a consequence, naval mines become undetectable by the usual conventional high frequency mine hunting sonars mounted on mine hunting vessels, as well as towed sonars or sonars mounted on AUVs.

ECA GROUP, specialized in robotics for naval mine countermeasures for over 50 years and which provides its solutions to over 30 navies worldwide, and SOACSY, company specializing in development of innovative acoustic systems and survey service, have signed a licensing agreement in order to provide a precise and efficient solution for buried mines detection and classification.

With its innovative seaCHIRP® technology, SOACSY sets the new standard in sub-bottom profiling data quality, resulting in improved signal / noise, accurate interpretation of detected objects, and cost effectiveness.

For more than ten years, SOACSY has been developing the seaCHIRP® technology for precise and efficient buried objects detection and localization: Combining Super-Wideband technology with High Resolution Beamforming and Synthetic Aperture Sonar processing, which was designed for the purpose of precise and efficient sub-seabed exploration and assessment. Data are collected, processed on-line in Low Resolution and visualized for Quality Check purposes, using the proprietary seaCHIRP® Software. Then, collected data are post processed and can be interpreted using the proprietary seaLOGS software.

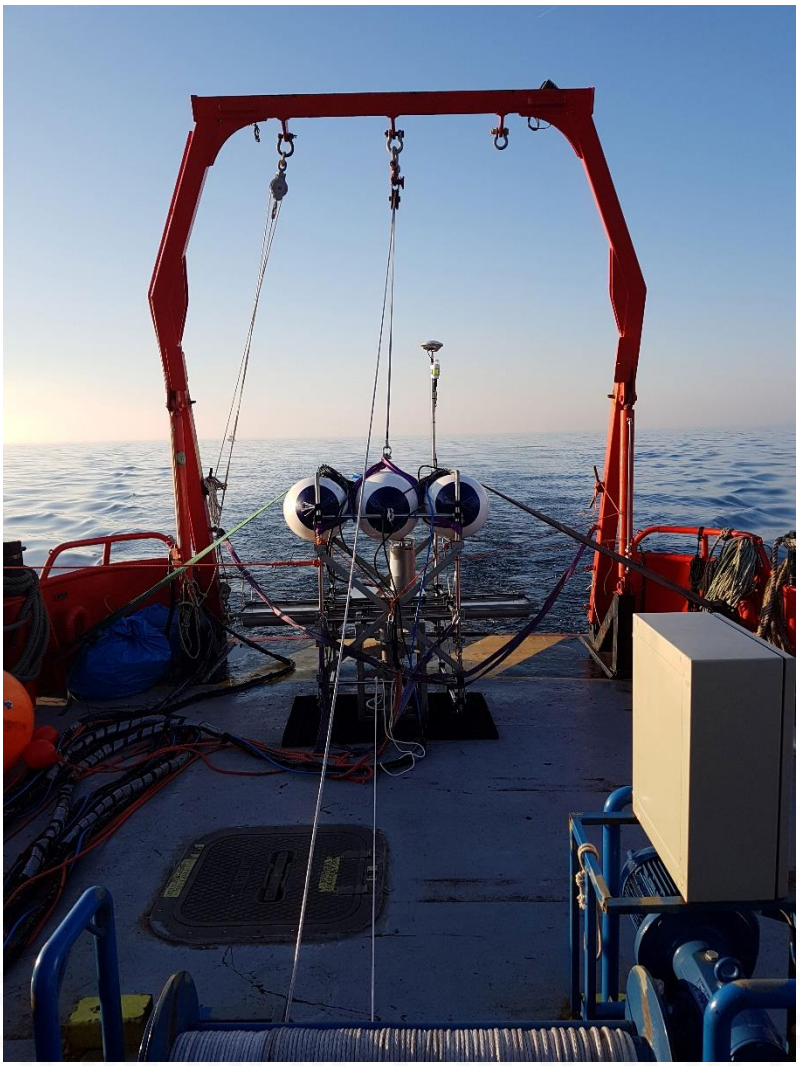
Since 2014, when first operational prototype was developed by SOACSY, the company performed different commercial operations which represent about 2400km of survey lines, with 1 Terabyte of data collected. The system was operated from 5 to 40m long ships. The main applications were detection of UXO (UneXploded Ordnance), boulders, debris, pipelines/cables, marine archeology and sedimentary studies.

The main advantages of the seaCHIRP® technology are full seabed coverage in minimized acquisition time, precise X, Y, Z contact positioning, contact size estimation, quick and easy set-up, as well as a compact, versatile and ruggedized system.

ECA GROUP will industrialize the seaCHIRP® technology in the frame of this license agreement in order to provide navies with a fully operational solution to detect and classify buried subsea mines. ECA Robotics Belgium (ECA Group) will be in charge of the development and industrialization of the seaCHIRP® technology as part of IES commitment of Belgium Naval & Robotics contract for the supply of 12 MCM ships for the Belgium and Netherlands navies.

Leveraging on the synergy with ECA GROUP's on-going works in high frequency synthetic aperture sonar, a real-time solution for data processing will be developed, using proprietary (patent pending) algorithms for efficient and accurate synthetic aperture processing.

The aim is to integrate buried mines neutralization capability within ECA GROUP's UMIS™ (Unmanned MCM Integrated System). This solution is a comprehensive drones based system for mine warfare operations, developed by ECA GROUP, for surveying and securing large or complex zones at sea as well as coastal areas. This modular solution is based on a wide range of unmanned vehicles such as USVs, UUVs (AUVs, ROVs, MIDS), towed systems (sonars, sweeps) and UAVs that can be configured according to the needs of the user and operational requirements. UMIS™ also integrates a comprehensive software suite UMISOFT™ allowing easy and complete management of the entire unmanned mission from preparation, planning and supervision, to data acquisition, processing analysis and management.



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ECA Group

Recognized for its expertise in robotics, automation systems, simulation and industrial processes, ECA Group has been developing complete, innovative technological solutions for complex missions in hostile and confined environments since 1936. Its product offering is designed for an international client base that is demanding, both in terms of safety and effectiveness. The Group's main markets are in the defense, maritime, aeronautics, simulation, industrial and energy sectors.
In 2019, the Group reported revenue of €112.5 million across its three divisions: Robotics, Aerospace and Simulation.

ECA Group is a Groupe Gorgé company.

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