

Multi-simultaneous MCM drone operation – operational experience with the Belgian Navy

ECA Group, in the framework of the Belgian Navy evaluation of Unmanned Maritime Systems 2017, tested on the North Sea conditions, the capability to deploy simultaneously its AUVs, USV and ROVs to perform parallel and collaborative Detection to Identification MCM operation.

By Dominique MALLET – ECA Group Minewarfare Business Manager

The Belgian Navy is in the process of replacing their legacy minehunters with modern platforms hosting unmanned systems to perform remote MCM. To define such new vessel concept, the Belgian Navy has organized in 2016 and 2017 two tests sessions, where the industry was invited to test and demonstrate the capability of their latest MCM systems, in order for the Belgian Navy to better define the type and number of equipment required to perform MCM in the most efficient way, with the latest technology.

ECA Group presentation for this seminar is to resume the actual operation that was carried out in June 2017 with the Belgian Navy, with its AUVs, ROVs and USV which were operated simultaneously and collaboratively from a single Belgian Navy CPV which stayed out of the defined minefield. The tests included A9-M Small AUV for Detection and Classification mission, INSPECTOR USV itself remotely deploying two Seascan ROVs for identification missions on the contacts previously shortlisted and communicated by the AUVs embedded Automatic Detection system. In addition to the ECA above list of drones operated from the CPV, was deployed in parallel from the same vessel, another ECA built AUV platform, A27-M long range AUV equipped with SAS sonar technology, showing the capability to operate multiple AUVs in parallel, in order to prove possibility to increase coverage rate compared to legacy hull mounted sonar technology.

With two types of AUVs operating at the same time, an USV deploying two ROVs and real time control and processing of sonar data at kilometers away of the operation from a ship mobilized in a couple of hours. This operation has been a world's first in terms of multi drone simultaneous operation, with more than 10 square kilometers of seabed mapped with less than 5cm resolution, which enabled more than 1600 MILECs detections, 4 contacts classified as MILCOs out of the 5 exercise mines placed by the Belgian Navy in the area.