



Undersea Defence Technology Glasgow

Daurade Trials

ECA has recently completed sea trials off the coast of Brest and Toulon of the Rapid Environment Assessment AUV developed for the French Ministry of Defence known under the name of Daurade and promoted by the company under the name of Alister.

The trials, which began in 2007, were intended to validate its hydrodynamic behaviour (stability, terrain following) and control performances (speed, endurance, sensors).

The keynote of the trials has been to tune and test the way the sensors work together simultaneously. The AUV is a platform for a variety of navigation and payload sensors which provide large amounts of data.

The AUV has inertial navigation system, doppler velocity log, a DGPS and navigation acoustic transponder, as well as a high accuracy depth sensor.

The perception sensors that are all installed and working simultaneously

on the vehicle include a high-resolution sidescan sonar, a multi-beam echosounder, a sub bottom profiler, a single-beam dual frequency echo-sounder and a conductivity/temperature/depth (CTD) probe, as well as an array of video and lights and an acoustic camera. There is also an obstacle avoidance sonar.

To make all these sensors work together at a given time, ECA has developed a synchronisation board and algorithms to manage the acoustics and to provide a common stable time reference.

The AUV has a length of 4.8m and a 0.7m diameter. It can dive down to 300m and maximum up to 8kts.

The endurance of this configuration with all payloads working is over 10 hours at a cruise speed of 4kts but can be increased up

to 20 hours depending on the sensors configuration.

"It's main function is for autonomous seabed search and survey and in its Daurade configuration for rapid environment assessment as well as covert reconnaissance," said Commercial Director, Robotics, Daniel Scourzic. Many of these properties are, however, valuable to the civil survey sector, especially the oil and gas industry.

ECA is also working on other AUV programmes for underwater minewarfare using the same platform that will receive a synthetic aperture sonar.

The Alister, carrying out trials under the name of Daurade

