Saab Seaeye AUV Demonstrated at Lake Vättern



For offshore operators, a 4D geospatial data acquisition system with real-time data visualisation is now available for the Seaeye Sabertooth AUV. Its full capabilities were demonstrated to representatives of 12 companies from seven countries, together with the Danish Navy, in Saab's exclusive underwater test centre at Lake Vättern, Sweden.

This system has been configured for the Sabertooth by Saab QPS, a Saab Seaeye partner and leading developer of hydrographic survey and mapping software. Operators get a complete hydrographic data acquisition, navigation and processing software package that is fully integrated into the Sabertooth.

The development unifies the QINSy and Fledermaus systems developed by Saab QPS

into a single enhanced option for the Sabertooth. QINSy is a data interface and acquisition software package that consolidates data acquired from different sensors in real-time. All acquired data can be viewed in various dedicated displays, which is ideal for real-time QA/QC of the data.

Fledermaus analyses and provides 4D visualisation of the acquired data, such as synchronised video, water column analysis, multi-beam sonars and pipe detection sensors.

For the demonstration the Sabertooth was equipped with a high-end sensor suite including side scan sonar, sub bottom profilers, high frequency imaging sonar, multibeam echo sounder and cameras, along with GPS, DVL and inertial measurement unit (IMU) supporting the navigation. Processing of the trajectory data was achieved with an algorithm developed by Saab Dynamics and renown for its navigational accuracy.

Survey mission

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One demonstration included an extended autonomous survey mission performed to show the extent of the navigation accuracy and trajectory performance, as well as the quality of the high-resolution sonar images captured.

Another involved a range of autonomous missions in the lake including seabed survey, structure inspection, obstacle avoidance and a docking manoeuvre into an underwater docking station. A fibre link was used to allow live viewing of the data being gathered.

Visitors had the opportunity to examine the Sabertooth, a breakthrough hybrid concept that combines the autonomy and range of an AUV with the manoeuvrability and hovering capability of a light-work ROV - making it a suitale vehicle for long-range missions where there is a need to stop and conduct a detailed task.

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