

## UNDERWATER SERVICES

# CoPilot advances underwater abilities

As an integral measure in ship maintenance, regular and thorough inspection of the hull represents a significant portion of time and cost. Issues from marine growth to structural damage are common destructive elements and require consistent management.

ROVs are widely regarded as key tools for conducting such inspections, and on occasion for repairing the damage; however these advanced technological solutions are not without their limitations. From issues such as holding the vehicle's position in a flowing current to undertaking a complex inspection whilst analysing the reported video or sonar data, the experience and skill required to pilot an ROV manually is immense.

However, SeeByte, an Edinburgh-based software company known for its smart technology for unmanned systems, provides a simple-to-use solution to combat the control issues faced by ROV pilots, saving time, money and valuable resources.

SeeTrack CoPilot has led the way in the offshore oil & gas industry by automating standard inspection and repair procedures for subsea structures, including ship-hull inspection, riser inspection and salvage. The system, which is easily retro-fitted to a wide selection of commercial ROVs, has been proven to improve operation efficiency by halving the time taken to undertake inspections, improving the quality of obtained data and allowing for novice ROV pilots to carry out complex tasks.

The basic functionality of SeeTrack CoPilot is centred around dynamic positioning and real-time monitoring; this autonomy is then expanded on by SeeTrack CoPilot's ability to change and hold position and heading, move relative to a target and cruise at a constant speed and heading, all

*The new system helps make ROV operations safer and more efficient. (Sub-sea vehicle pictured belongs to Sub-Atlantic.)*



using SeeTrack CoPilot's simple point and click interface. By minimising the need for manual joystick control, the pilot is provided with the freedom to analyse the reported data of the inspection, or to undertake repair work, leaving SeeTrack CoPilot to control and position the ROV.

One of SeeTrack CoPilot's key attributes is its ability to integrate with any ROV. Although originally developed as part of a collaboration with BP to provide greater autonomy and control to its ROV missions, vehicle agnosticism has since been demonstrated through SeeByte's integration with multiple vehicles. Such ROVs include Saab's *Seeye Falcon* and *Lynx*, the Sub-Atlantic *Mohawk* and a selection of work-class ROV systems including the Perry Slingsby XLX and Subsea 7's Hercules.

Ken Bryson, technical manager at Subsea 7 said: "This innovative system offers smart solutions that contribute to making operations safer and increasing the efficiency of our ROV activities, which in turn improves our operational and project performance."

The element of being vehicle agnostic with a simple plug-and-play interface allows for SeeByte's technology to remain easy to use and impartial to a growing ROV market.

Most recently, SeeByte has partnered with SMD to develop a solution for its fall pipe ROV system. SMD will make full use of the control and accuracy provided by SeeTrack CoPilot to enhance rock dumping operations and reduce costs and time-consuming repeat missions.

Further praise has recently been bestowed on the software package by Geodetic Offshore Services Limited's CEO Emanuel Ekpeyong. Having had SeeTrack CoPilot integrated with his recently purchased Sub-Atlantic Mohawk ROV, Ekpeyong said: "I was very pleased to see for myself how easy it was to control the ROV using SeeTrack CoPilot."

Ioseba Tena, SeeByte's sales manager, said: "SeeTrack CoPilot is changing the way subsea inspection, maintenance and salvage is conducted. The software isn't designed to make the job of a pilot redundant, the experience, expertise and human interaction a pilot brings to an inspection is invaluable; SeeTrack CoPilot improves operations by making the job of the pilot less stressful as the accurate piloting of the ROV becomes a simple case of pointing and clicking on a chart. SeeTrack CoPilot deals with control so the ROV reaches its required position accurately and effectively."



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