

# Taking dynamic positioning above and below water



Ioseba Tena, Sales Manager, SeeByte

Ioseba Tena is SeeByte's Sales Manager. He is responsible for the development of SeeByte's overall commercial strategies and managing the marketing sales process within the company. He joined SeeByte as a founding member of the management team and initially led the development of navigation, sonar imaging and sonar processing tools. He has played an integral role in the development of SeeTrack and was the recipient of a SMART Award for SeeGauge, a video metrology tool. Prior to SeeByte he worked as a Research Associate at Heriot-Watt University. At the university he developed state-of-the-art navigation, concurrent mapping and localisation, sonar processing and obstacle avoidance systems for Autonomous Underwater Vehicles (AUVs).

The ROV is the workhorse responsible for offshore field development and subsequent inspection and maintenance operations. Continuous improvements have shown that the ROV can be relied on for ever more complex intervention work. With an operator firmly in-the-loop, the scope of possible operations and interventions is now ever increasing. Recently, new technologies improving the control of ROVs are being offered to the industry. Dynamic positioning lies at the core of these improvements.

The offshore industry is experiencing a global shortage of qualified and experienced people. Young people are now less inclined to undergo technical or scientific training and the strain on the industry has been considerable. The problem of the people challenge is particularly applicable across the ROV industry. Young pilots struggle with the steep learning curve and experienced pilots are few and far between. DP for ROVs meets this challenge by providing ROV pilots a safer, more stable and easier to operate ROV. DP helps to improve the performance of even experienced ROV pilots, facilitating streamlined operations.

DP also enables a number of automatic routines

such as station keeping and moving to a set of relative co-ordinates.

DP impacts positively on standard commercial operations in a number of ways. It lowers the risk of operations; ROVs are safer, more stable and more reliable. Also, delays due to the data being of poor quality are minimised. Thus, the ROV contractor is able to run operations more efficiently and not pay penalties for being late on a job. Contractors avoid both the domino effect and the impact that delays have on the whole operation and revenue stream.

DP makes complex tasks easy. Less experienced crews are able to carry out more complex missions. ROV supervisors can get on with the job of supervising and pilots are able to climb the learning ladder quicker. It therefore deals with the industry-wide shortage of pilots. It also helps an ROV gather better data, simplifying the processing effort required and commanding higher revenues.

This paper presents SeeTrack Offshore, a retrofit DP system for ROVs. The paper demonstrates that there are clear advantages over conventional manual control for a range of tasks. These advantages provide clear operational benefits for the ROV user.