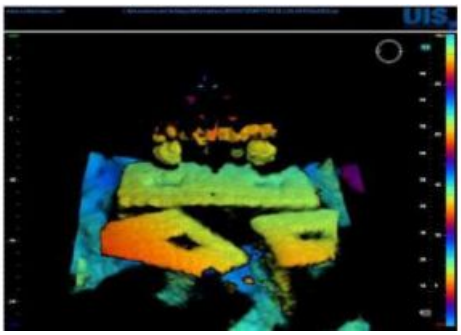
Breakwater to Shield Spanish Basin



One of the largest port expansion projects is currently being undertaken by UTE Langosteira, a consortium of companies. The project, on the north-west coast of Spain, consists of forming a 240-hectare deepwater shipping basin protected by a man-made breakwater running for almost 3.5km across the bay. Detailed civil engineering works have been carried out to ensure this breakwater will withstand the forces of the large Atlantic swells that periodically strike this area.

On the seaward side, the breakwater is being formed using 150 tonne concrete armouring blocks. On the inward side, it's designed to have thousands of 52 tonne rectangular concrete blocks placed in a wall-like arrangement to a depth of about 14m. Placing these blocks underwater was a great challenge which the engineers met by turning to CodaOctopus and the Echoscope 3D real-time i.e. 4D, high-definition multibeam sonar.

During the recent Ports and Coasts seminar held in Las Palmas, Mr. José Enrique Pérez Noguer, UTE Langosteira's General Manager, presented results of their use of the Echoscope 4D sonar. The audience heard that since testing and subsequently purchasing the system, their productivity and accuracy for block placement has almost trebled. More importantly, due to the now infrequent use of divers to check alignment, there have been no reported safety issues.

"We had a real problem to precisely place these concrete blocks in zero visibility. After evaluating several sensors, the only choice suitable for our crane operators was the Echoscope 4D sonar." Mr. Enrique further noted, "It greatly improved our productivity, it enhanced our safety record due to substantially less underwater intervention by divers."

Commenting on these results Stephen Auld, Managing Director of CodaOctopus Products, said, "We're proud that such a significant civil engineering project has benefited from our unique sonar. The capabilities of the Echoscope and the clarity of image for crane operators really does make this the world's first 4D multibeam sonar."