

achieved with array type antenna systems like WERA which are the only systems able to provide the spatial and temporal resolution required for reliably detecting the fast approaching tsunami wave.

The theoretical basis for this approach is that tsunami waves generate a characteristic periodic ocean surface current pattern that can be used as the tsunami "signature". This tsunami signature was detected in the signal recorded by the WERA system in Chile. A comparison of the measured radar signatures with nearby sea level measurements showed a high correlation between the two signals confirming that the WERA system was successful in capturing the tsunami signal.

This unique radar measurement of a real tsunami is the proof of concept the ocean radar community has been waiting for. The delay of this discovery and announcement is due to the fact that the radar site in Chile is not equipped with real-time telemetry.

In addition, the significance of this finding required the rigorous review of the acquired data and confirmation of the results by three independent scientific groups (University of Concepcion, University of Hamburg and Hamburg University of Technology, Germany). The final and detailed results of the analysis will be presented by these groups in upcoming conferences and in the peer reviewed literature.

The WERA ocean radar system used, manufactured by Helzel Messtechnik of Germany, can be operated from land and provides data over a range exceeding 200 kilometres (for low HF frequencies). Within this range, a tsunami signature can be detected making WERA a useful component for any national and/or international tsunami early warning system.

Pipeline record

SeeByte, the UK-based creator of smart software technology for unmanned systems, has announced that Fugro Survey Pty Ltd, Australia, has successfully broken the world record for the longest uninterrupted pipeline inspection using a low-logistics AUV.

SeeByte's SeeTrack AutoTracker software was utilised by Fugro in conjunction with the Gavia AUV to survey a pipeline on the Northwest Shelf off Western Australia in 90 metres of water. The vehicle successfully inspected 31 kilometres of pipeline on a



single mission, surpassing SeeByte's existing record. The mission was manually ended due to low battery while AutoTracker was still operating successfully.

"The SeeTrack software was developed to enable AUVs to carry out export pipeline inspections," said SeeByte. "Through SeeTrack AutoTracker the inspection data is improved and time is saved by reducing repeat missions which are usually required due to missing data."

Ian Hobbs of Fugro said: "The data attained from this successful mission has provided us with clear and accurate information regarding the status of the pipeline. The SeeTrack software operated at an ideal offset and it is apparent that, with practiced operations, the software provides a time-efficient method for accurate pipeline inspection. We were very pleased with the results."

Nordic agreement

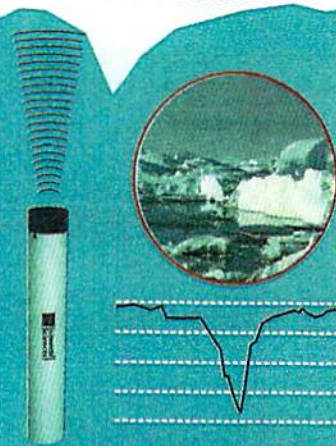
Aberdeen, UK-headquartered marine rental company Ashtead Technology has announced the appointment of MacArtney Norge A/S as its agent for the Nordic Region.

"MacArtney will provide Ashtead Technology's full equipment rental fleet, incorporating positioning equipment, ROV sensors, hydrographic and geophysical equipment and IRM, NDT and diving equipment to customers in the Nordic region, from its base at Stavanger," said a spokesman. "A technical workshop and support facilities will also be provided from the new MacArtney base."

The territory covered by the agreement includes Norway, Denmark, Finland, Sweden, Iceland and the Faroes.

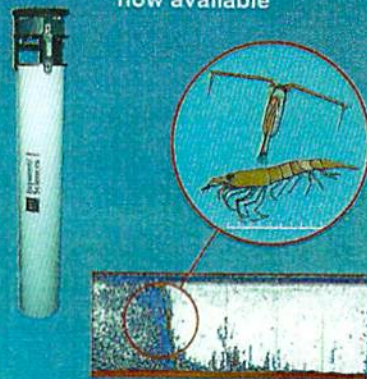
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