

Inertial Navigation for MBARI's ROVs 'Ventana' and 'Doc Ricketts'



Subsea inertial navigation technology supplied by Sonardyne Inc., Houston, USA, has been selected by the Monterey Bay Aquarium Research Institute (MBARI) for its deep-rated remotely operated vehicles (ROVs), 'Ventana' and 'Doc Ricketts'. The SPRINT systems will be used in conjunction with MBARI's existing Sonardyne Ranger 2 acoustic tracking systems to improve the accuracy, precision and integrity of subsea vehicle positioning in water depths to 13,000 feet.

The SPRINT for *Ventana* has already been installed and commissioned whilst the unit ordered for *Doc Ricketts* is scheduled to be delivered in the coming months.

Located in Moss Landing, California, MBARI is recognised as a world centre for advanced research and education in ocean science and technology. To support its work, it has at its disposal a wide range of marine technology and assets including *Ventana* and *Doc Ricketts* and the research ships which serve as their support vessels, *Rachel Carson* and *Western Flyer*.

Now in its third generation, SPRINT's inertial sensors make optimal use of acoustic aiding from data sources including USBL, LBL and Doppler Velocity Log (DVL) and pressure sensors to extend operational capability and improve vehicle control.

SPRINT supports dual gyrocompass and INS operating modes, meaning that ROV pilots and science teams are able to rely upon its output simultaneously. Its small, lightweight titanium housing provides valuable space and weight savings that can instead be used for additional payload and samples.