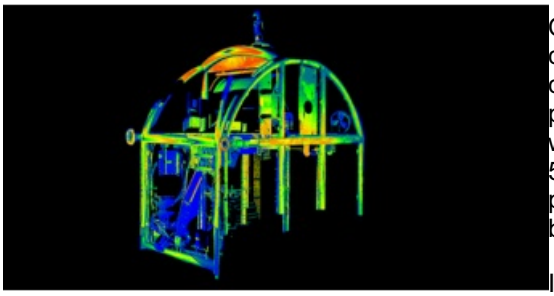
ULS-500 Underwater Laser Scanner Interface for QINSy



The 2G Robotics ULS-500 underwater laser scanner is compatible with QPSâ€™s QINSy. Recently, 2G Robotics performed a structure inspection demonstration with a customer to validate the ease of operation and demonstrate the capabilities of the ULS-500 system. To collect the data in profile mode, the ULS-500 published data in LAS format into QINSy. QINSy was interfaced directly to ROV sensors (high-end INS, Doppler) and the ULS-500 to correct for ROV altitude in real time and to georeference using INS position updates aided by Doppler in order to position the ULS-500 data and build a complete 3D model.

In this trial, an ROV cage was scanned to simulate structure inspection and two flanges were attached to the cage as a mock-up to simulate spool metrology. Both stationary (scan mode – with the rotary actuator) and on-the-fly (profile mode – without the rotary actuator) scans were conducted with the 2G Robotics ULS-500.

The QINSy suite can be used for various types of surveys, ranging from simple single beam surveys up to complex offshore construction works.

Underwater laser scanning enables detailed inspections to be easily conducted and highly accurate measurements to be instantaneously and repeatably captured from the 3D point cloud visualisations generated by the scanners. The laser scanners can be deployed by ROV or AUV and provide millimetre-level resolution point cloud data that far exceeds the resolution of sonar. This millimetre-level resolution provides engineers with the detail needed for developing effective design and repair solutions.

2G Robotics is excited that customers can now benefit from the capabilities of QINSy's hydrographic data acquisition, navigation, and processing suite to facilitate with subsea surveying and engineering operations.