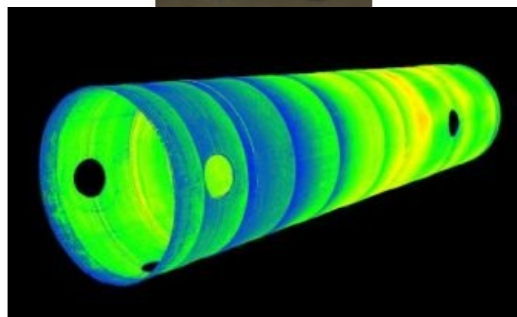
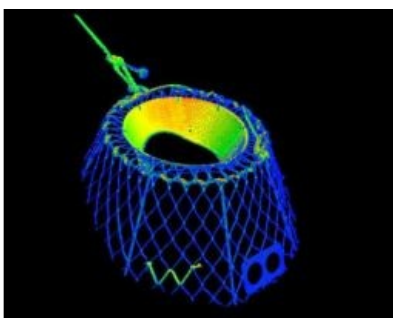


2G ROBOTICS

3D Visualisations Generated by Underwater Laser Scanning



2G Robotics is located in Waterloo, Ontario, Canada. The company's underwater laser scanners generate real-time 3D models of subsea assets and environments from which submillimetre measurements can instantaneously and repeatably be captured. These models provide the precision and accuracy needed for detecting and assessing damage, developing design and repair plans, and performing maintenance and installations.

Jason Gillham, founder and CEO, has always had a passion for marine technology. He founded 2G Robotics in 2007 after completing his studies in Mechanical Engineering at the University of Waterloo. Gillham possesses over ten years of experience in the development of marine technology, the operation of

marine robotics, and the processing and analysis of data from marine systems. Driven by the desire to improve subsea imaging and measurement technology, Gillham and the team at 2G Robotics developed the ULS line of underwater laser scanners. The company has continued to expand since 2007 and is nearing a total of 50 systems built and deployed worldwide.

Current Profile

The mission of 2G Robotics is to provide the best subsea imaging and measurement technology. 2G Robotics is dedicated to using advanced research, development and engineering for the production of truly cutting edge solutions. The foundation of 2G Robotics is its wealth of engineering expertise in the development of innovative and reliable systems, which has led to the success of its underwater laser scanners. The 2G Robotics ULS line currently consists of three models which operate at varying distances, the ULS-100 (short-range), ULS-200 (mid-range), and ULS-500 (long-range). These systems can easily be deployed by ROV, AUV or diver.

"When customers are confronted with more challenging requirements or deployment constraints, we are keen to work with them to develop innovative and optimal solutions," says Gillham. Collaborating with customers is intrinsic to 2G Robotics' culture. The company has collaborated with customers, including ADUS DeepOcean and C&C Technologies, to develop deployment solutions tailored to their specific needs to best facilitate their projects.

International and Global Scope

2G Robotics' underwater laser scanners have been deployed on all seven continents. The scanners have been used to inspect pipelines, mooring chains, jacket nodes, water-supply tunnels, water wells, and coastal retaining walls, and have also been used to perform spool metrologies, monitor ice scallop formations, assess fishing gear performance, and provide 3D archaeological records of underwater historical sites.

2G Robotics targets seven markets with its underwater laser scanners. These seven markets are: civil infrastructure, hydroelectricity, marine archaeology, nuclear, offshore oil and gas, research and education, and water distribution. The offshore industry is the company's primary market and, within that market, the company focuses on pipeline survey and inspection, helping to ensure safe offshore operation by providing the detailed information needed to mitigate the likelihood of ruptures that would cause devastating environmental damage.

Earlier this year, 2G Robotics solidified its global presence with the formation of a global sales and distribution partnership with Seatronics, an Acteon company. This partnership facilitates global access to 2G Robotics' high-resolution underwater laser scanners and provides the benefit of Seatronics' expertise and global technical support.

View on the Future

“2G Robotics remains focused on its vision to improve subsea metrology. We continually strive to advance and better our technology in order to deliver the best results,” states Gillham. The ULS-500 will soon be available with an increased scan range, increased sample rate, and an integrated and synchronised stills camera. Looking to the future, 2G Robotics will continue to innovate to enhance its existing product line and provide new products and solutions to ensure efficient and reliable subsea surveys and inspections.

<https://www.hydro-international.com/content/article/3d-visualisations-generated-by-underwater-laser-scanning>
