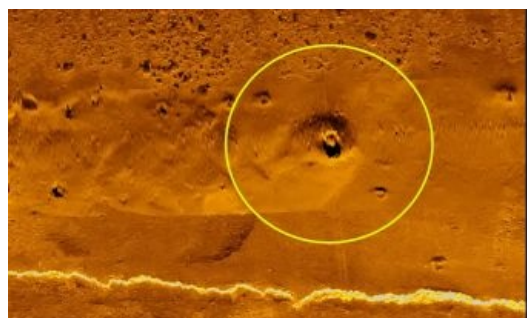


EdgeTech Introduces New Method for Nadir Gap Coverage



EdgeTech – a leading company in high-resolution sonar imaging systems and underwater technology – has recently introduced an innovative and new method to provide nadir gap coverage on the EdgeTech 2205 sonar platforms. Complementing this new technology is SonarWiz from Chesapeake Technology, providing a software solution to support the processing and mosaicking of the new

gap-fill solution.

The 2205 system with gap-fill technology was designed specifically for hosted platforms operating in shallow water or within close proximity to the bottom. The sonar is especially suited for unmanned surface vehicles (USV) and unmanned underwater vehicles (UUV/AUV). The new 2205 system is available in a number of dual and tri-frequency configurations and the gap-fill technology is available in a number of frequency options. The most popular frequency set, the 850kHz and 1,600kHz dual-frequency combination, is ideal for high-resolution side-scan sonar surveys where the nadir gap can now be filled with data while the vehicle performs single pass survey operations.

Gap-fill Shadows

A special feature of [EdgeTech's](#) gap-fill solution is the ability to 'see' the nadir gap from both the left and right sides, providing shadows from either direction, as well as in a three-dimensional aspect in the nadir gap. Gap-fill shadows are perpendicular to the vehicle's path and consistent with traditional side-scan methods, enabling easy interpretation of data. Additionally, gap-fill data in the 2205 system is coincident with the side-scan data and is therefore geospatially the same, unlike other solutions that look forward and across the vehicle path, making target positions between the side-scan and gap-fill data less robust. The area directly below the vehicle, until now often lacking in coverage, can now be viewed with the gap data mosaicked right into the main side-scan sonar display using SonarWiz. Harold Orlinsky, general manager of Chesapeake, said: "This data combination removes the digital seam seen at the side-scan nadir. SonarWiz makes a GeoTIFF image of the seafloor with the dataset."

Side-scan Sonar and Bathymetry

The EdgeTech 2205 is a compact and configurable sonar system, designed for integration on third party underwater and surface vehicles. This modular unit can be configured, based on the customers' application, to collect side-scan sonar imagery, sub-bottom profiles and bathymetric data, singly or in concert with one another. The system is available as packaged 2205 electronics enclosed in a pressure vessel, or the core electronics can be provided as boards mounted onto a chassis so that the customer can integrate the system into their vehicle's dry electronics area. Two transducer arrays, one on each side of the vehicle, provide side-scan sonar, gap-fill and bathymetry. An optional sub-bottom profiler is also available. The system can operate independently of the hosted platform by simply storing the data, or it can be configured to autonomously interoperate with the vehicle during its mission.



EdgeTech gap-fill sonar example.