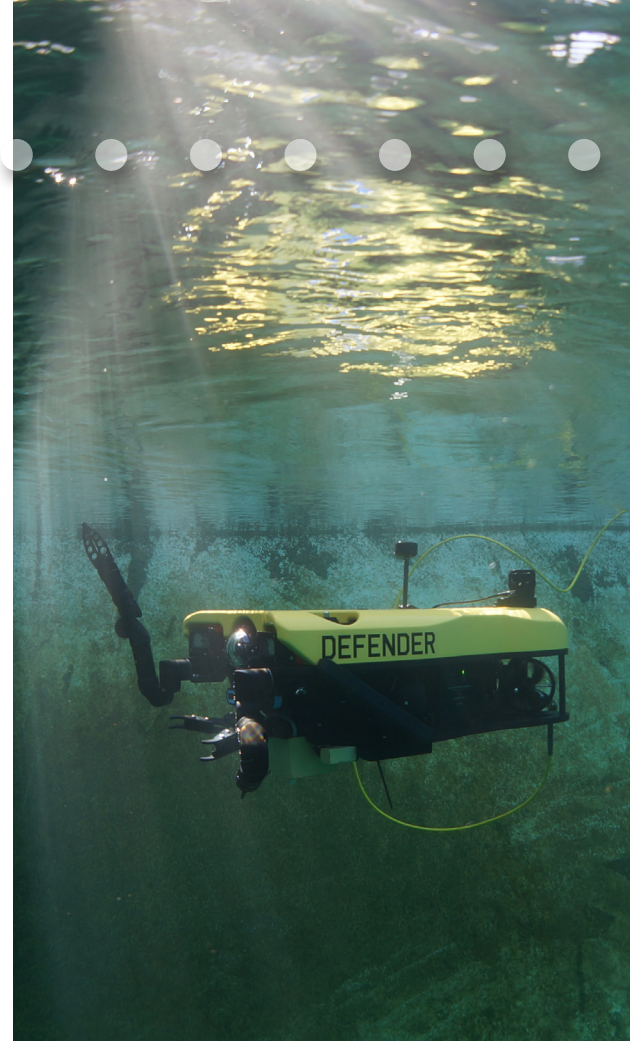


CASE STUDY

Ballard Marine Integrates GeoDVR With Mission Specialist Robot to Obtain Precise Video Data



Ballard Marine Construction, headquartered in

Washougal, Washington, conducts inspections and surveys for condition assessments on all types of marine and underwater infrastructure using underwater robotic systems and experienced, certified divers.



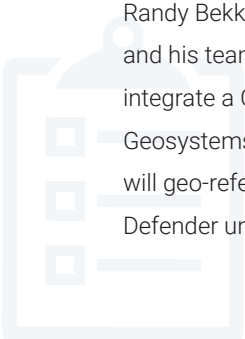
Summary

Randy Bekkers, Ballard Marine's ROV supervisor, and his team worked with VideoRay's engineers to integrate a GeoDVR system produced by Remote Geosystems for recording inspection information that will geo-reference video data from a Mission Specialist Defender underwater robot.



Challenge

As underwater robotics technology evolves to make missions more efficient and safer, Ballard sought to partner with a manufacturer of systems that easily integrate advanced third-party sensors.



CASE STUDY



Solution

GeoDVR technology enables Ballard to record video from up to four cameras simultaneously while also capturing position data from an ultra-short baseline (USBL) acoustic positioning system. This combination is unique because it synchronizes the video and position data during video playback.

The Ballard and VideoRay engineering teams equipped a Mission Specialist Defender system with the GeoDVR. Like all Mission Specialist robots, the Defender system has a modular design, enabling operators to add new sensors and tooling from a wide range of manufacturers to accommodate a broad selection of tactical, communications and power options.



Results

Bekkers and his team can review video and see it alongside the positioning information displayed on a map. A cursor moves along the track line in sync with the position of the robot. When reviewing the data, they can click on a point in the track line, and the video will automatically advance to that location.

This technology is particularly useful for conducting repeat inspections of an asset. The team can load up multiple sets of inspection data and easily compare imaging from one inspection to another to see if there are changes in the condition of the asset. With the GeoDVR software, the inspectors can create geo-referenced inspection notes and comments in real time that they can import into an inspection report.



VideoRay goes beyond personalized customer support and will collaborate with you to incorporate innovative technology to design a custom underwater robot.

— Randy Bekkers, ROV Supervisor,
Ballard Marine Construction



For more information about this collaboration, watch the video ***“Geo-Referencing Subsea Video for Enhanced Inspection Analysis, Situational Awareness and Asset Lifecycle Management”*** by Randy Bekkers, Ballard Marine Construction, and Jeff Dahlke, Remote GeoSystems. [**WATCH NOW**](#)

