



Anti-Submarine Warfare operations utilising autonomous Wave Gliders for detection, classification, and localisation

Mitchell Hinchcliffe - BlueZone Group

BlueZone Group has been awarded a Defence Innovation Hub contract to develop Anti-Submarine Warfare (ASW) capability using Australian-developed sonar and track processing systems installed in unmanned surface vehicles. The system is an innovative integration of Sonartech Atlas's sonar processors and Acacia Systems automated tracker technology with leading-edge ASW sensors and unmanned platforms. It will provide a fully autonomous persistent surveillance capability which will complement the ADF's existing and planned ASW force structure.



The project will deliver automation and autonomy to ADF ASW to a level never before attempted anywhere in the world. BlueZone Group completed final trials in September 2022 and is pleased to provide a project update to those following the projects process since our presentation in 2021.

Defence applications for commercial technologies – Autonomous Underwater Vehicles and Sonar

Mark Roberts – Kongsberg Maritime

With the conflict in Ukraine and heightened tensions in Asia Pacific, the current threat to global security is more complex and probably higher than at any time in recent history. There is a recognised need for Defence to simplify procurement processes, streamline existing programs, react quicker, and ultimately be more agile. As a result, Defence are turning more and more to tried and tested technology from the commercial sector.



Autonomous Underwater Vehicles (AUV) and sonar are two technologies which have been used extensively in the commercial field, in particular the oil and gas industry, mainly for seabed mapping, debris clearance surveys, monitoring surveys and inspection of infrastructure such as jackets, pipelines and subsea cables. Similar applications are also relevant to Navy.

The presentation will provide an overview of Autonomous Underwater Vehicles (AUV) and sonar technologies and how they can be used in Defence applications such as intelligence, surveillance and reconnaissance (ISR), mine countermeasures, seabed survey and inspection / monitoring of critical infrastructure.

Autonomous systems for addressing Defence's challenges in a hotly contested subsea environment

Sandro Giotto - BlueOcean MTS

Our regional security situation is evolving rapidly. This has been emphasized in a number of Defence publications and through new and re-invigorated alliances, and has stimulated Major and Minor Defence Projects. Undersea warfare and advanced undersea surveillance systems will be part of the AUKUS pathway moving forward. Uncrewed and autonomous systems will play a crucial role in dramatically increasing Defence's surveillance mass and in moving risk away from the Warfighter.



Blue Ocean routinely operates autonomous systems for multi-month maritime surveys, ideally suited to wide-area and choke point surveillance. Demonstrated innovations include adaptations of long-endurance AUV that are suited for acoustic surveillance and re-positionable seabed sensors. This presentation will highlight Blue Ocean's innovative approach to applying new technology to address Defence's challenges in a hotly contested subsea environment.

Images courtesy of BlueZone Group

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