

Autonomous Technology Helps to Discover Historically Significant Shipwrecks



Greensea Systems, a manufacturer of marine robotics, has provided the inertial navigation, system control and autonomy technologies utilised in the recent historic discoveries by Vulcan Inc. of the USS *'Lexington'* and *'Juneau'* shipwrecks. R/V *'Petrel'*, owned by Paul A. Allen, found the USS *'Lexington'* on 4 March at 3,000 metres below the surface, resting on the floor of the Coral Sea more than 500 miles off the eastern coast of Australia. This discovery was quickly followed by the sighting of the USS *'Juneau'* on 17 March, 4,200 metres subsea off the coast of the Solomon Islands.

OPENSEA operating platform

Greensea's software is part of the technological advancement facilitating exploration at extreme depths. The Greensea OPENSEA operating platform provides a unified, integrated system and supervised autonomy to R/V *Petrel's* ROV with cutting-edge features such as automated ascent and descent winch control system, synchronized pilot and co-pilot chairs, integrated system control touchscreen displays, and a multi-vehicle user interface.

Greensea takes great pride in being part of the deep sea exploration done by R/V *Petrel*. Since launching *Petrel*, Allen's underwater research team has discovered an additional 14 lost warships, including the USS *Indianapolis*, USS *Ward*, USS *Cooper*, and several Japanese warships.

Sullivan Brothers

The two recent discoveries of WWII ships USS *Lexington* and USS *Juneau*, have particular historical significance. The *Lexington* is one of the first aircraft carriers built and commissioned by the United States of America. The *Juneau*, discovered on St. Patrick's Day, carried the famous Sullivan Brothers who became national heroes after touching the hearts of Americans. The five close-knit brothers were all lost at sea when the *Juneau* sank during the Battle of Guadalcanal. Their deaths lead to the US War Department adopting the Sole Survivor Policy which includes separation policies for family survivorship. In total, 687 men perished when the *Juneau* sank.

For further information on the USS *Lexington*, USS *Juneau*, and other Vulcan projects, visit the following websites: www.paulallen.com and www.vulcan.com