AUV Expands Deepwater Survey Business for Tesla

Tesla Offshore, based in Houston, USA, is purchasing a Bluefin-21 AUV from Bluefin Robotics (USA). This purchase coincides with Teslaâ€™s intent to expand its presence in deepwater oil and gas field development, as well as positioning itself to pursue governmental, environmental and academic applications support.

Tesla Offshore will operate its AUV on a global basis and, specifically, in the Gulf of Mexico where US government regulatory agents are considering proposals that mandate archaeological and shallow hazard survey data be acquired by AUV technologies.

Multiple Sensors in Payload Section

Assigned to spearhead the implementation of the technology are Tesla's Nathaniel Usher, director of Geoscience and George Loy, Innovative Solutions manager. The Tesla Bluefin-21 AUV is a modular system capable of carrying multiple sensors in a single payload section. Its efficient power solution allows extended operations at depths up to 4,500 metres. The design includes swappable payload sections and battery modules for fast surface turnaround, as well as portability and flexibility to operate from various ships of opportunity worldwide.

Synthetic Aperture Sonar

The AUV's sensor suite has been chosen to exceed the data quality and resolution requirements of today's deepwater survey markets. These include a broadband multibeam echosounder, a chirp sub-bottom profiler, and a very high definition digital camera. In addition, the system will be the first AUV in the industry to be equipped with a fully integrated synthetic aperture sonar (SAS) produced by Raytheon Applied Signal Technology. The PROSAS Surveyor is expected to provide a decimetric imaging resolution across swath ranges up to 450 metres per side, which in turn can lead to increased survey efficiency at depth.