

The Economics of Scale: Using Autonomous Underwater Vehicles (AUVs) for Wide-Area Hydrographic Survey and Ocean Data Acquisition

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ABSTRACT

This paper discusses the use of the Autonomous Underwater Vehicle (AUV) for hydrographic surveying and environmental data acquisition. The AUV is an augmenting technology that offers real potential to increase cost-effectively the quantity of ocean data acquisition while significantly improving data quality.

The paper provides an appropriate introduction to AUVs, with examples of some of the many commercial vehicles in use. Contemporary vehicles are discussed together with some of the more relevant research and developments that are taking place. An overview of the ocean survey public sector and the commercial market is considered as a means of providing a scale for assessing the impact of AUV technology. Each of these sectors is discussed and areas identified where AUVs can offer cost savings, the benefit of efficient wide-area acquisition, for ocean monitoring and as augmenting/facilitating technological solutions to solve challenging problems.

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