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Underwater Remotely Operated Vehicle (ROV) Exploration

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Abstract : Our objective is to develop a full-fledged system for exploring and studying nature of fossils and to extend this to underwater archaeology and mineral mapping. This includes aerial surveying, imaging techniques, artefact extraction and spectrum analysing techniques. These techniques help in regular monitoring of fossils and also the sensing system. The ROV was designed to complete several tasks which simulate collecting data and samples. Given the time constraints, the ROV was engineered for efficiency and speed in performing tasks. Its other major design consideration was modularity, allowing the team to distribute the building process, to easily test systems as they were completed and troubleshoot and replace systems as necessary. Our design itself had several challenges of on-board waterproofed sensor mounting, waterproofing of motors, ROV stability criteria, camera mounting and hydrophone sound acquisition.

Keywords : remotely operated vehicle (ROV) dragonair, underwater archaeology, full-fledged system, aerial imaging and detection
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