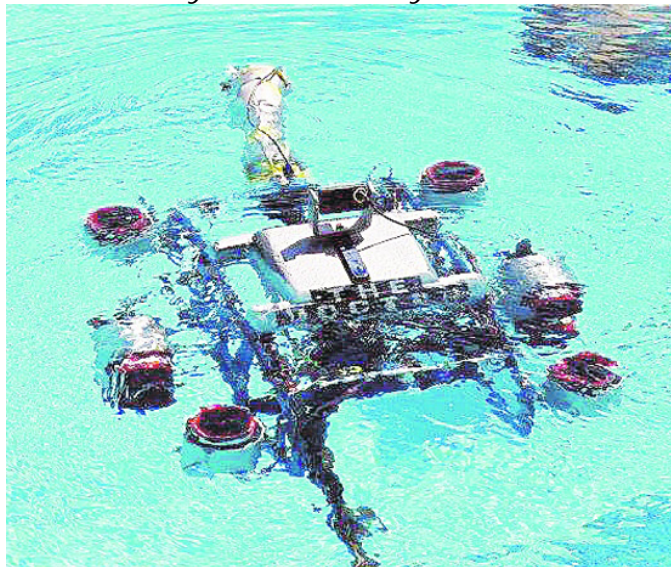


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Bentley ROV Club Takes First for Best Design and Engineering

Submitted by Jenna Starkey



"The Doctor" in action. Photos provided

A talented group of young engineers from Bentley School's ROV (Remote Operated Vehicle) club won first place at the 13th Annual Monterey Bay Regional ROV Contest for Best Engineering and Design on April 20. The Marine Advanced Technology Education (MATE) Center at Monterey Peninsula College held the 13th Annual Monterey Bay Regional ROV Contest at Aptos High School. This year Bentley moved into the Ranger class, the highest high school level of the ROV competition, competing against 11 other high schools to win the award.

This annual contest challenges students to build ROVs to complete underwater tasks that mimic real-life scientific expeditions. The tasks change every year from finding and recovering sunken shipwrecks, to managing oil spills. This year's contest focused on ocean observing systems as a response to the MATE request for proposal to build, operate and maintain cabled underwater observatories similar to one being built in the Northwest.

Bentley's ROV club (Phoenix Electronics) successfully built what the team calls "The Doctor." The team members invested over 1,200 hours assembling over 520 individual

parts, drilled 200 holes for fasteners, wrestled with 500 feet

of cables, while making sure that 250 electrical and 48 video connections were secure. The Bentley ROV featured a frame made from a single sheet of high density plastic, six camera shots displayed on three monitors, a computer-controlled robotic arm, a digital temperature data logger, and eight motors with shrouded propellers - all controlled by a comprehensive controls and power distribution system. The members of Phoenix Electronics were organized into the Frame, Video, Propulsion, Controls, Tools, and Design Integration and Facilitation divisions. Each division was responsible for a specific subsystem of the ROV.

In addition to the 26 mission task steps performed in 12 feet of water while driving remotely, the team created a product poster and delivered a presentation about the science and engineering behind their vehicle to a group of professional engineers and ROV pilots/technicians from the Monterey Bay Aquarium Research Institute. The Bentley ROV Club also won the Ranger class award for being the most spirited team, partly due to their enthusiasm and matching Hawaiian shirts.



Bentley School's ROV club, Phoenix Electronics. (Not pictured: Oren Khan, Chase Chabot, Shane Pracar, Alexis Pracar, Griffin Dey, Margot Witte, and Natalie Sechow.)

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