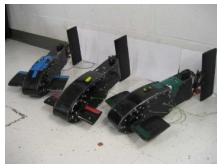


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By: Dan Talpalariu, Science Editor



Robofish underwater tracking and exploring device
UW Nonlinear Dynamics and Control Lab

Robofish Tracking and Investigating Devices

The robotic fish are independent of human control

A team of researchers from the University of Washington has come up with a group of complex [underwater robots](#) that use exactly the same swimming moves as fish to travel through the liquid medium. The robots are not relying on human remote control for their movement process, and are also able to communicate among themselves and act as a group when performing more complex tasks. Such a group of immersed robots could prove more useful than a single unit for the tasks assigned to it. The test has the group of 3 [robots](#) stalking a human-controlled shark toy across the test water tank. They are aided in this endeavor by small cameras located in the corners of the tank, which provide positioning data to their small on-board computers. "There's no human directly telling them what to do," shares UW assistant professor of aeronautics and astronautics Kristi Morgansen. "They have a program on board and they're getting various sensor information, either from their on-board sensors or stuff that's transmitted over a wireless channel." "Longer term, what will likely happen is we'll put more complicated sensors onto them to have them find their own way," she adds. The fish model was found to be much better suited for water movement than other previous designs. The robots are built from cheap, common materials, like "standard hobby-shop servos" and fiberglass-coated Styrofoam for the fins, aluminum for the body and hobby-shop batteries as a source of power, explains Morgansen. The robots' initial design and content were upgraded in time. Now, they include Bluetooth communication, which eliminates the need to disassemble them for reprogramming purposes, as well as a larger on-board memory. "These vehicles would be used for... doing data collection or tracking things in the ocean, making maps, doing inspections around docks or things like that," adds Morgansen.