

# Liquid Robotics launches quartet on epic swim across Pacific

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(PhysOrg.com) -- Four self propelling robots, called Wave Gliders, from the company Liquid Robotics were launched last week from San Francisco for a 33,000 nautical mile journey. The robots took off from the St. Francis Yacht Club. The robots will swim together to Hawaii and then will split into pairs. One pair will be off to Japan (“Piccard Maru” and “Fontaine Maru”). The other pair will be off to Australia (“Benjamin” and “Papa Mau”).

The company aims to set a Guinness world record for longest unmanned ocean voyage. The journey will take an estimated 300 days. Their propulsion systems will run by waves and their sensors will be powered by the sun. Much of the robots’ bodies sit above water. They propel themselves by repeatedly changing their buoyancies, using the motion of surface waves to paddle underwater fins. The upper half of the wave-riding [robot](#) looks like a surfboard and is attached to a lower part that sports the fins.

The four robots will take sensor readings every 10 minutes on data such as salinity, water temperature, weather, fluorescence, and dissolved oxygen. These [gliders](#) are essentially little data centers on the ocean with big ambitions in collecting information that scientists can use. The sensors will also collect information about wave features and currents. The Iridium satellite network will stream the robot data. The data can be accessed on Google Earth’s Ocean Showcase, or in a more complete form to researchers who register.

The four robots are expected to collect approximately 2.25 million discrete data points. The expedition is being supported by Google Earth and Richard Branson's Virgin Oceanic. Most of the ocean remains unexplored with less than 10 percent of it mapped out, said Jenifer Austin Foulkes, Google product manager.

The point, says Graham Hine, senior vice president of operations at Liquid Robotics, is to prove that this type of technology is ready to increase understanding of the ocean.

James Gosling, creator of Java, is chief software architect of Liquid Robotics, which sells the robots to energy companies that monitor offshore rigs and collect oceanographic data. Customers also include government and research organizations.

As for this project, Liquid Robotics wants to see what the scientific community does with all the data. The company seeks project abstracts, and will award the top five proposals. The award is in the form of six months' use of a Wave Glider, to be optimized to collect whatever information the winner needs.

**More information:** [google-latlong.blogspot.com/2011/11/liquid-robotics-quartet-on-epic-swim-across-pacific.html](http://google-latlong.blogspot.com/2011/11/liquid-robotics-quartet-on-epic-swim-across-pacific.html)

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