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**Informal Robot Proposal**

I have been thinking of doing a couple of different ideas. Initially I had wanted to do something that involved water. I was looking at making a swim buddy to ensure the safety of swimmers if they were to get a cramp or become unable to swim for some other reason. Adam pointed out that this would be very difficult mainly because RF-ID only works well in close proximity so the robot would constantly become “lost”. Another Idea was a submerged victim locator, but this would be difficult because, as I didn’t know before, sonar does not actually work under water. Not to mention how would the robot be able to delineate between a body on the bottom, and the actual bottom. I have finally narrowed my choice down to one of two possible robots.

The first robot I am looking to do would be a shark locator/warning system for beaches. The robot will pace back and forth in a certain marked area and monitor the water for any “fish” over a certain size. If a possible shark candidate is found, the robot will notify a computer on the beach, preferably near a lifeguard who can have to water vacated.

The robot will remain in a certain area by having lines run with buoys. The lines will contain a system similar to what is used in invisible fences for dogs. This will ensure that the robot roams in a specific spot and does not float off to sea. As for the actual locating of sharks, there are a good number of commercial fish finders that use active sonar to locate fish. I will mount one of these on the robot, or maybe just the circuit, and this device will do the actual detection. Then there will be some sort of electronic transmitter to relay data to the computer on the beach.

The second robot I am thinking of doing will be a climbing robot. It will be able to ascend vertical surfaces and possibly perform some kind of other tasks. I am not sure what the other task will be right now. Possibly cleaning the wall, measuring the height it has climbed, find studs in the wall, or lift supplies.

I am looking to model this robot after a robot I found on the web. It is located here <http://www.technologyreview.com/Infotech/18602/?a=f> . The robot uses some sort of adhesive to stick to the walls. The “feet” are located on a spinning servo or motor and there are three on each servo. There are at least two “feet” attached to the surface at all times. There is also a tail that is used to provide a force that pushes down on the front of the robot in order to acquire good adhesion to the wall. I would stick with the same basic idea and then modify the robot to perform one of the other tasks listed above.