Photovoltaic Martian Bugs

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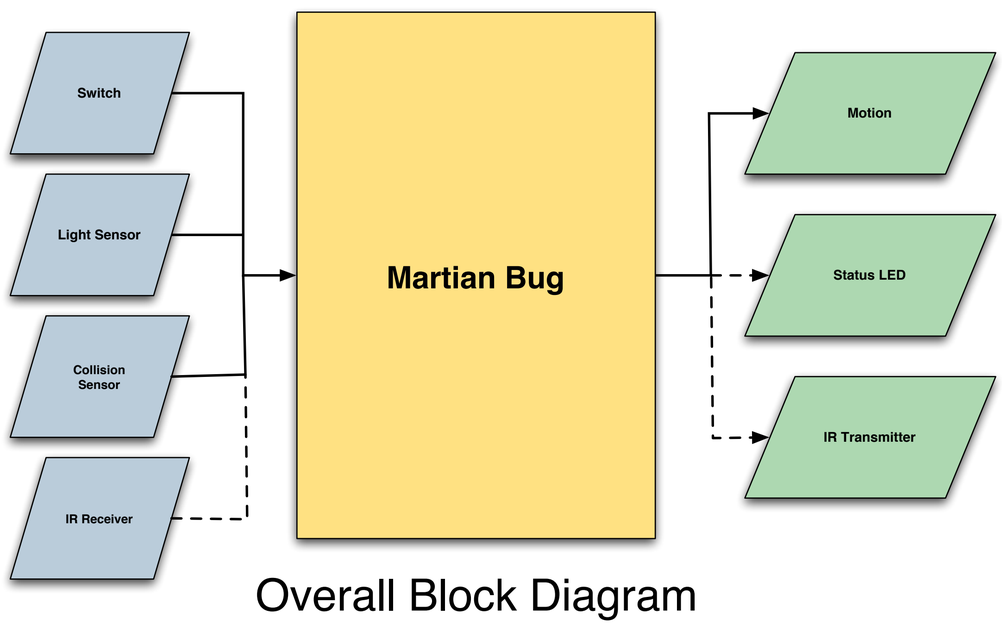
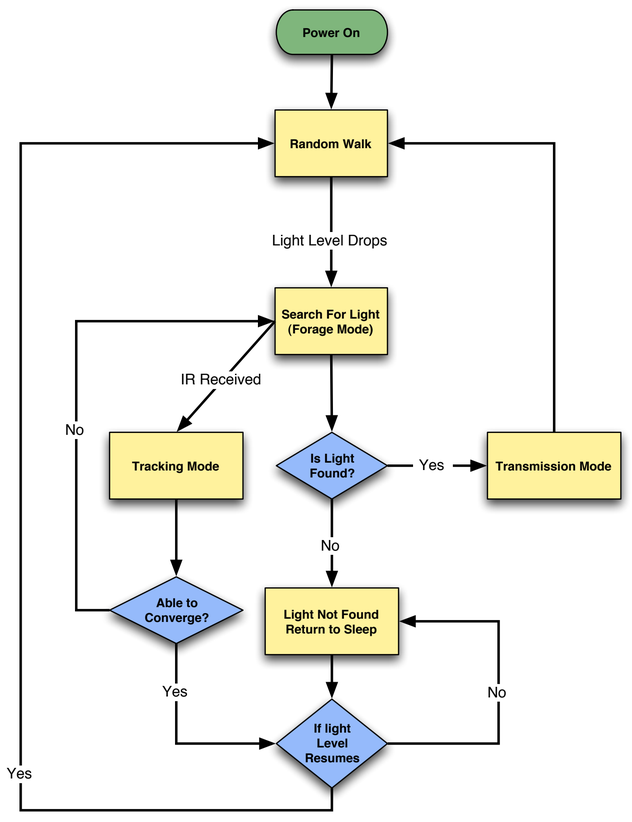
Project Objective

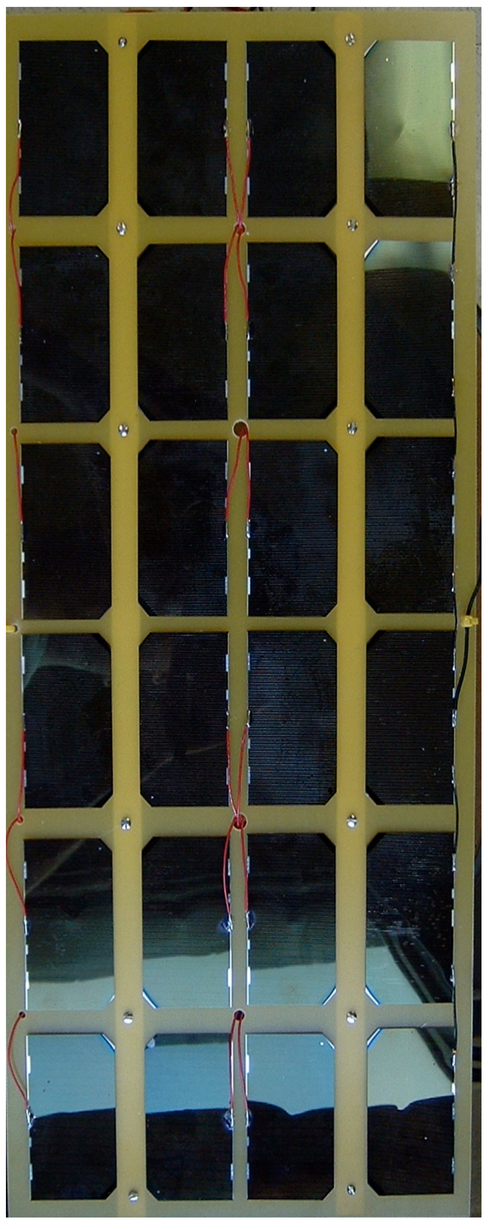
The goal of this project is to create a solar-powered autonomous robot capable of continuous operation under adequate light conditions. The system is based around a low power 8051 microcontroller. The microcontroller provides the modes of operation that the robot uses to interact with its environment. These modes are influenced by input from several sensors mounted on the robot.



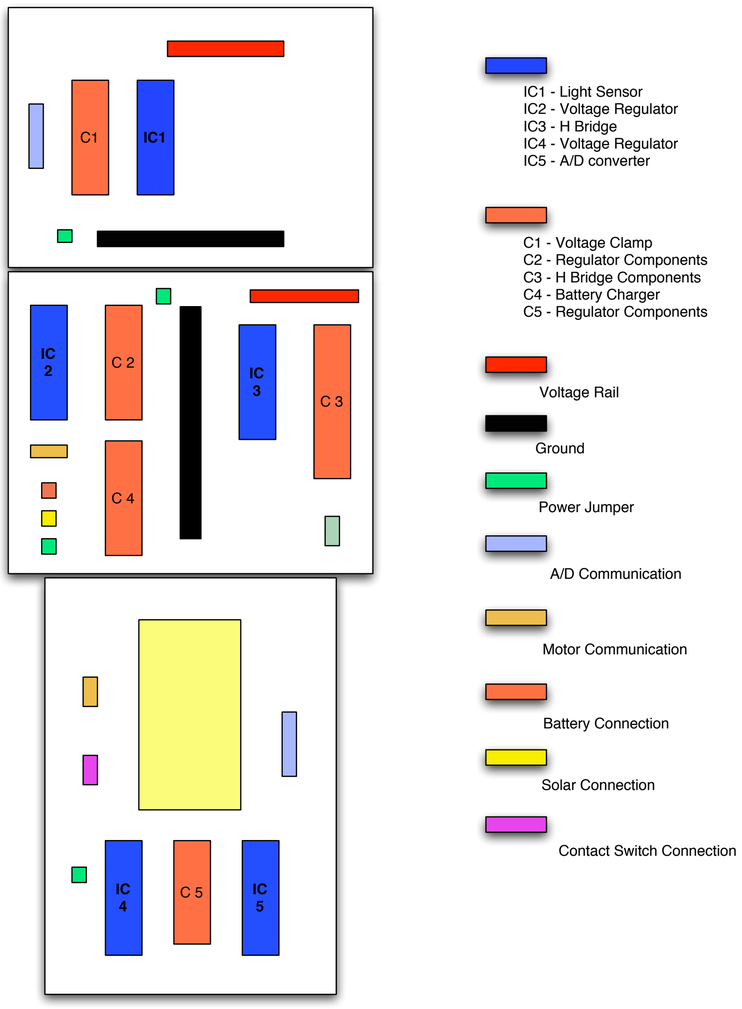
Overall Block Diagram



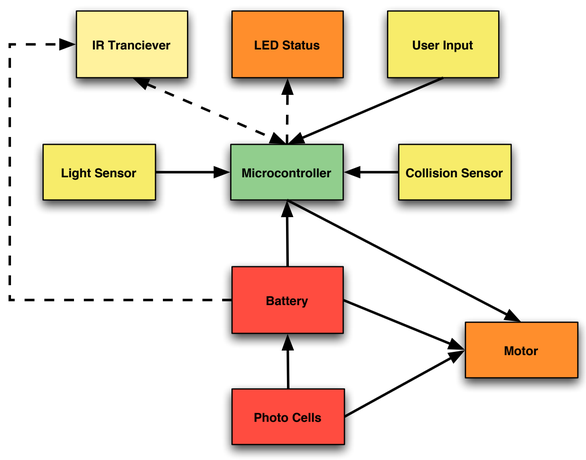
Software Flow Chart



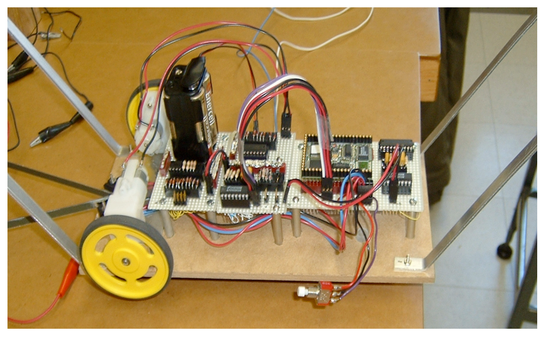
Solar Array



Board Layout



Hardware Flow Chart



Robot Platform