



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Kyle S.F. Boots	Project Number 22619
Project Title Robotic Control: Wireless Control of a Robotic Claw using Bend Sensors	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of this project is to create a bend sensor glove that can control a robot over a long distance without wires connected between the two.</p> <p>Methods/Materials A Power Glove (with bend sensors in it), Wires and Shrink tubing (for re-wiring the power glove), Lego Mindstorms programming system, 2 Lego RCX bricks (miniature computers with infra-red sensors built into them), 2 motors, Lego bricks, Lego rods & gears, and tape.</p> <p>Results I was able to create this robot by using the two RCX bricks to communicate by sending and receiving infra-red messages. The messages were sent when the electrical resistance from the gloves bend sensors reached a certain level. These messages were converted to commands used to control the robot.</p> <p>Conclusions/Discussion My invention could be expanded to create robots controlled from one location, for use on the other side of the world. A bend sensor glove controller, like the one I built, would be useful when rescue workers need to search a collapsed building or when workers need to investigate in sewers and other places that are not easily accessible.</p>	
Summary Statement To make a claw robot that can be controlled by a bend sensor glove, using infra-red signals instead of wires running between the two.	
Help Received Mom helped me buy needed materials. Dad taught me how to solder wire connections.	