



California Science Center
CALIFORNIA STATE SCIENCE FAIR
2001 PROJECT SUMMARY

<p>Your Name (List all student names if multiple authors.) Keerthi K. Prabhala</p>	<p>Science Fair Use Only</p>
<p>Project Title (Limit: 120 characters. Those beyond 120 will be ignored. See pg. 9) Internet Guided Robot</p>	<p style="font-size: 2em; font-weight: bold;">S1116</p>
<p>Preferred Category (See page 5 for descriptions.) 11 - Mathematics & Software</p>	<p>Division _ Junior (6-8) <u>X</u> Senior (9-12)</p>
<p>Abstract (Include Objective, Methods, Results, Conclusion. See samples on page 14.) Use no attachments. Only text inside these boxes will be used for category assignment or given to your judges.</p> <p>Problem Statement: My objective was to establish that a robot can follow custom High Definition Language(HDL) commands over the Internet from a remote location.</p> <p>Materials and Methods: A Hexapod robot was constructed from a kit. It is moved by 3 servo motors controlled by a FT639 Chip. Internet Explorer browser on the Client PC enabled users to communicate with Apache Web Server on the Server PC through a LAN hub. The server controlled the robot using Perl CGI script, and guided the robot over the serial port. Four HDL commands to move the robot forward, reverse, turn left, and turn right were designed and tested.</p> <p>Results: For each HDL command, e.g. "Walk Forward 5 steps", the robot executed the command with the intended precision and in the intended direction.</p> <p>Conclusions: I concluded that robots could be made to follow human intelligible commands over the Internet from a remote location and to perform useful tasks.</p>	
<p>Summary Statement (In one sentence, state what your project is about.) It is possible to guide a robot over the Internet with good precision to perform useful tasks.</p>	
<p>Help Received in Doing Project (e.g. Mother helped type report; Neighbor helped wire board; Used lab equipment at university X under the supervision of Dr. Y; Participant in NSF Young Scholars Program) See Display Regulation #8 on page 4. Father helped discuss concepts, supervised PCB wiring, and lent a helping hand. Mother helped in literature search.</p>	