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ANDRIOD BASED APPLICATION FOR WIRELESS CONTROL OF WHEELCHAIR

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The advent of new high-speed technology and the growing computer Capacity provided realistic opportunity for new robot controls and realization of new methods of control theory. This technical improvement together with the need for high performance robots created faster, more accurate and more intelligent robots using new robots control devices, new drivers and advanced control algorithms. This project describes a new economical solution of robot control systems .In general; the robots are controlled through wired network. The programming of the robot takes time if there is any change in the project the reprogramming has to be done. Thus they are not user friendly and worked along with the user preferences. To make a robot user-friendly and to get the multimedia tone in the control of the robot, they are designed to make user commanded work. The modern technology has to be implemented to do this. For implementing the modern technology it should be known by all the users to make use of it. To reach and to full-fill all these needs we are using android mobile as a multimedia, user friendly device to control the robot. This idea is the motivation for this project and the main theme of the project. In this modern environment everybody uses smart phones which are a part of their day-to-day life. They use all their daily uses like newspaper reading, daily updates, social networking, and all the apps like home automation control, vehicle security, human body anatomy, health maintenance, etc has been designed in the form of applications which can be easily installed in their hand held smart phones. This project approached a robotic movement control trough the smart phones. Hence a dedicated application is created to control an embedded robotic hardware. The application controls the movement of the robot. The embedded hardware is developed on arduino microcontroller and to be controlled by a Smartphone on the basis of Android platform. Arduino controller is to receive the AT commands from the Smartphone and takes the data and controls the motors of the robot by the motor driver L293D. The robot can able to move forward, reverse, left and right movements. The Smartphone is been interfaced to the device by using Bluetooth. A Bluetooth device HC-05 module (Wi-Fi) is going to be added to arduino microcontroller to receive commands from smart phone. A wireless camera is mounted on the robot body for monitoring purpose even in complete darkness by using infrared lighting.