Karunya INSTITUTE OF TECHNOLOGY AND SCIENCES
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KARUNYA NAGAR, COIMBATORE – 641 114, TAMIL NADU.

Title : Speech Recognition Based Wireless Automation Of Home loads For Physically Challenged.

Student Name : Derish Kumar R, Dino Linekar R, Neville Revanth Immanuel G and Stephen Elanchezhian M.

PI Name : Mr. E. Bijolin Edwin.

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Hardware & Software Requirements

Avr Atmega 32 Microcontroller, Max 232 IC, Voltage regulator 7805, Diode IN4007, Wheelchair Chasis, Wheels DC Motor, Battery, Voice Controlled Module, Relay Driver IC ULN2803

Objective

To develop a voice controlled wheelchair along with home automation system by implementing user voice as an input to get control over the movement of the wheelchair and also the home appliances.

Methodology

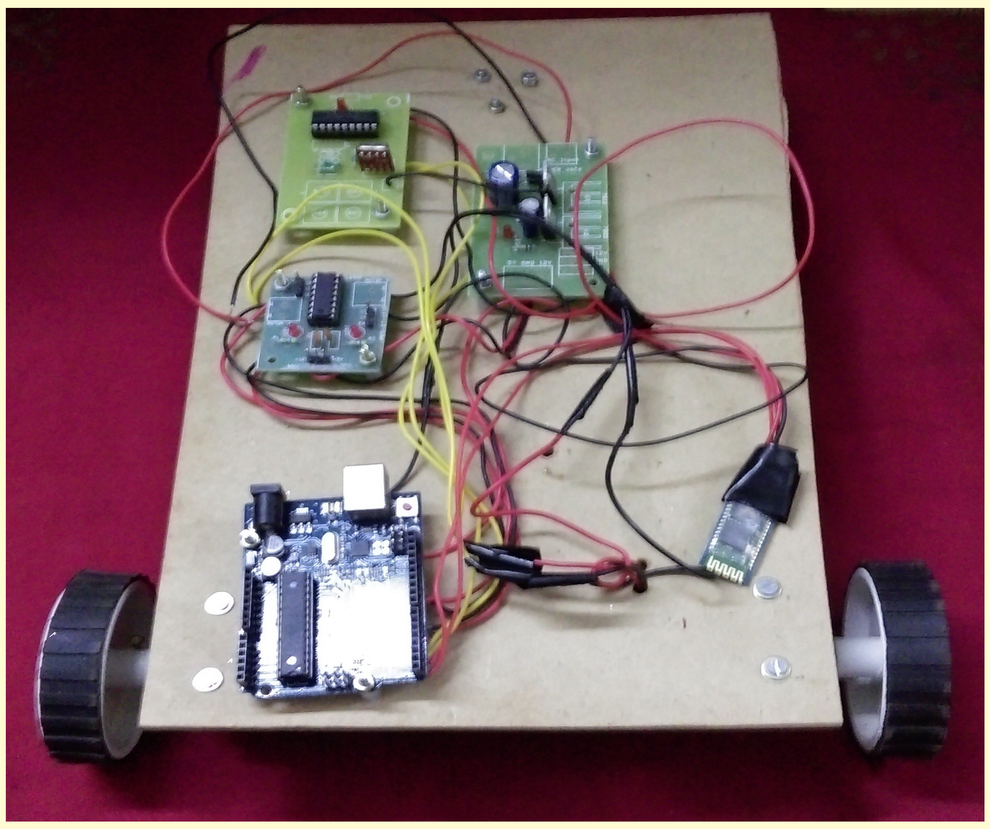
- Google Speech Synchronized mobile application for voice control.
- ZigBee Technology, Transmitter and Receiver.
- Bluetooth Connectivity, Secure control.

Salient Features

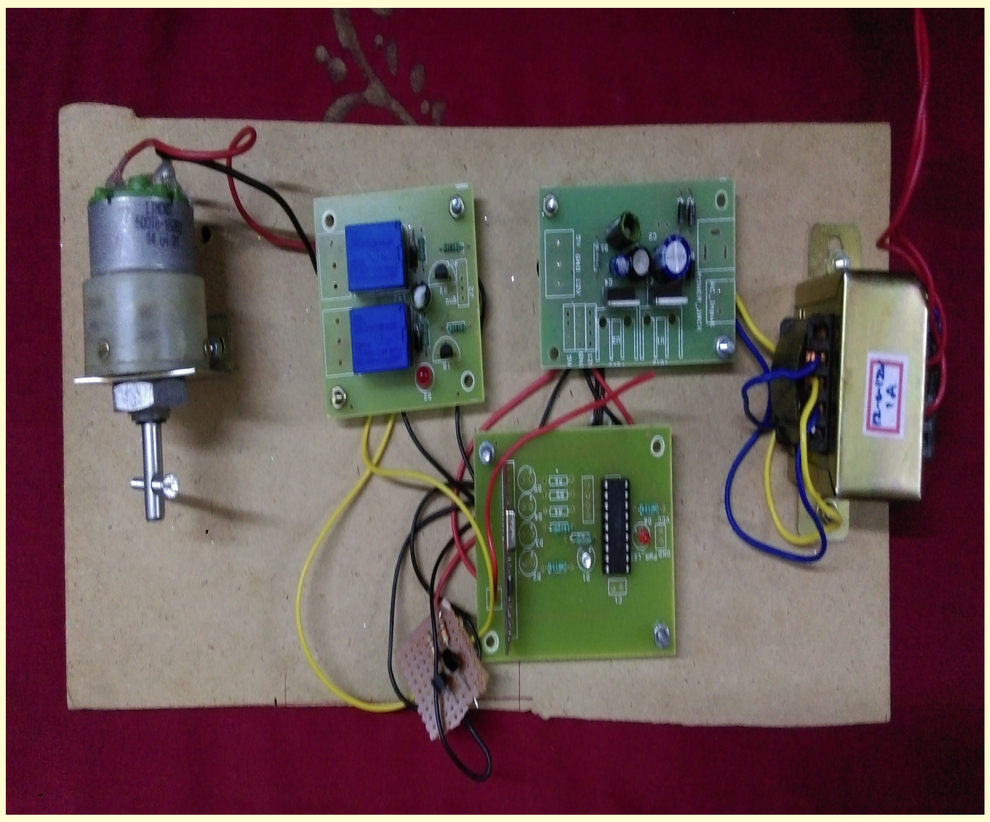
- This project is implemented in such a way that helps in getting control of both the systems at the same time.
- Since Bluetooth is found easier to use at maximum circumstances, it has been implemented. The other way is with Wi-Fi, which is pretty faster.

Application

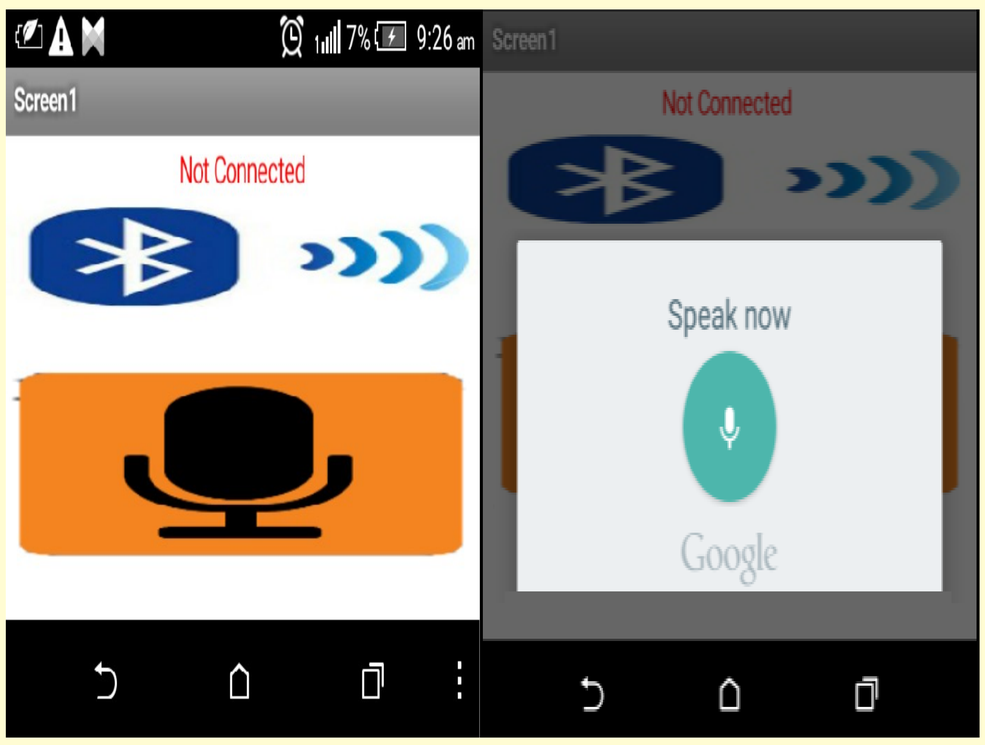
This study shows that, the performance of this wheelchair movement control and home loads automation by means of human voice plays an important role for the physically challenged and also for the people those who can speak but cannot walk (or) stand.
This implementation doesn't need any help, it is self-assistive and reduces manual effort.



(a) Wheelchair Controlled System



(b) Home loads Controlled System



(c) Google Speech Recognition with Bluetooth connectivity