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An intelligent approach in controlling of wheelchair for physically challenged

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Abstract

This project describes the wheelchair system with user friendly touch screen interface. In this technologically developing world patients with some cognitive disabilities and impairment must be provided with smart wheelchair systems for their easy navigation and safety. This device helps the disables to have automatic advancement to their destination through predefined paths in the indoor system. The use of touch-screen enables less muscle movement and less muscular pressure than the self propelled wheelchairs which are being used from ages. The Infrared sensor system has been integrated in this wheelchair with the possibility of avoiding obstacles and downstairs and hole detection. The need to control a powered wheelchair using only body motion adds many benefits to power wheelchair users. People with upper limb weaknesses or limited motion, and amputees that have lost their arms would be able to control their wheelchair using their body motion or residual limb without assistance. Those who desire to play sports would have their hands free to play the game. This technology is designed to be safe to operate, easy to use, and be available for a wide range of models by

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different powered wheelchair manufacturers. Programming the accelerometers in the touchscreen, coupled with a wheelchair motor control system, has allowed the wheelchair user to control wheelchair motion. © Research India Publications.

Author keywords

ATMEGA 8; Motor drives; RISC; Touchscreen; Wheelchair

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