WHEELCHAIR MOVEMENT USING EEG ELECTRODES

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Brain-Computer Interface (BCI) is a developing concept and has been used in many applications. This paper deals with the concept of BCI being incorporated into developing a wheelchair that can be used for helping paralyzed patients navigate in safe environments. We use basic three electrode sensor to capture the EEG signals from the forehead. The emphasis is on the beta signals, which involves the attention and focus level. Therefore, by collecting the control signals (focus level) and digitizing them, the PIC microcontroller is programmed. This provides the interrupts for the motor driven wheelchair. Hence, a BCI based control has been developed using EEG electrodes. The analysis performed, using the model, on ten different people proved that this system can provide a convenient manner to control an electric wheelchair for paralyzed patients.

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