MONITORING BATTERY CONSUMPTION LEVEL USING CURRENT SENSOR

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ABSTRACT

Nowadays, power wheelchair is one of the most important vehicles especially for people with physical disabilities such as paralysis, stroke, handicap and many more. Electric wheelchair is also called electric-power wheelchair or powerchair can be moved by an electrically based power source, regularly motor or batteries. In fact, it is very important to have frequent monitoring battery level because power wheelchair need the sufficient battery level for it to be move around. Therefore, this project is developed to monitor the battery consumption level and real time battery monitoring. Current sensor is used to measure the current state of the battery level. In this project, Internet of Thing concept is applied where sensor and mobile application is integrated known as BLife. Blife was designed using the visibility of the system status principles consist of knowledge is power, appropriate feedback, compel user to action and communication create trusts. If the battery in the lower state, the power wheelchair users will be informed through mobile application by showing an indicator to inform that it needs to be recharged. Moreover, the current location of the power wheelchair user also will be notified to the caretaker so that they know of the user whereabout. Evaluation of Blife has been conducted to power wheelchair user and students of UiTM. Evaluation consist of two part which is functionality testing and evaluation on impact of the visibility of the system status. Most of them are satisfied and giving a good feedback on impact of the visibility of the system status. This project is contributed to the disable people who has limited access to charge battery and to aware them on their battery level.

Keywords: Monitoring system, Real Time Battery Monitoring, Arduino Microcontroller, GPS module, Current Sensor, Internet of Things.