Arduino Based Time Control System with RTC Function (IA)

Rogelio C. Suganob Jr., MAX ANGELO DAPITILLA PERIN

Department of Computer Engineering, College of Engineering, Architecture and Industrial Design

Bohol Island State University-Main Campus

Tagbilaran City, Bohol

[rogelio.suganob@bisu.edu.com](mailto:rogelio.suganob@bisu.edu.com), [maxangelo.perin@bisu.edu.ph](mailto:maxangelo.perin@bisu.edu.ph)

Imaginative Abstract. Energy consumption is the most ecological problems facing in our world today. Managing electrical energy sources becomes prominent, eco-efficiency and eco-innovations are at the top of the sustainability agenda in most countries. In this paper, a plug remover device is presented, it aims to control and monitor household consumption using a mobile application or computer. The device is embedded with real-time clock (RTC) control system which you can schedule the time of powering on and off of the device. Using the real-time control system, it can control your appliances or smart devices with ease by setting up the time you want to unplug and plug the power source. The study recognized the measures of satisfaction and usefulness of the plug remover system and its mobile application. The research provide a significant result presents a positive impact in decreasing the energy consumption rate of a household. In addition, the research makes an important theoretical contribution by including the environmental concern as an additional variable to well-established information systems success model.

Keywords: Eco-efficiency, Eco-innovations, Plug remover system, Real-time clock (RTC).