



COLLEGE OF COMMUNICATION AND INFORMATION TECHNOLOGY

APR 10 2015

DTMF HOME APPLIANCE SWITCHING CONTROL

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A Project Design presented to the Faculty of the
College of Communication and Information Technology
In Partial Fulfillment of the Requirements for the degree
Bachelor of Science in Computer Engineering
Ramon Magsaysay Technological University
Iba, Zambales

March 2015





COLLEGE OF COMMUNICATION AND INFORMATION TECHNOLOGY


CERTIFICATION

This project design entitled **"DTMF HOME APPLIANCE SWITCHING CONTROL"**, prepared and submitted by Marc Ianne G. Taberdo, Romar Jay D. Quijano and Aljohn B. Tongson in partial fulfillment of the requirements for the degree **Bachelor of Science in Computer Engineering**, has been examined and recommended for Oral Examination.

Thesis Committee



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APPROVAL

Approved by the Panel of Examiners on Oral Examination on March 15, 2015 with the grade of _____.

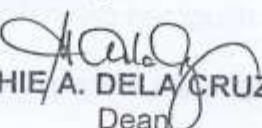

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Abstract

TABLE OF CONTENTS

Technology is a never ending process. To be able to design a product using current technology that will be beneficial to the lives of people is a huge contribution to the community. This paper presents the design and implementation of a low cost yet effective and flexible instrument that uses DTMF Technology.

Traditionally electrical appliances in a home are controlled via switches that regulate the electricity to these devices. Home automation is becoming more and more popular around the world and is becoming a common practice. The process of home automation works by making everything in the house automatically controlled using technology to control and do the jobs that we would normally do manually. Home automation takes care of a lot of different activities in the house. The project proposed a unique System for Home automation utilizing Dual Tone Multi Frequency. Each key-press on the phone keypad generates DTMF signal consists of two tones that must be generated simultaneously. The user console has many keys, each corresponding to the device that needs to be activated. The encoder encodes the user choice and sends via a FM transmitter. The FM receiver receives the modulated signal and demodulates it and the user choice is determined by the DTMF decoder. The DTMF decoder was tested for accurate detection of the presence of these tones under various conditions. Based upon this, the required appliance is triggered.