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**FINAL REPORT OF DIPLOMA PROJECT 2**

**SMART PHONE LIGHT**

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## ABSTRACT

The word 'telephone' comes from word 'tele' which means far and word 'phone' which means sound. So, telephony involves the conversion of sound signals into audio frequency analog electrical signal, which can then be transmitted over an electric transmission system and then recovered to sound signal at the receiver end. The electric signals may be transmitted by radio or transmission line through a telephone networks. This network is referred to as Public Switching Telephone Network (PSTN).

So, in our project we finally choose to implement one system which give more helpful to people. We called our project is "Smart Phone Light". The first part of our circuit is ring detector. To realize it, we use an opto-coupler transistor (MCT2E)/ (MCT2) as our ring detector.

We also used IC 74LS123 in this circuit. The 74LS123 re trigger able mono stable multi vibrator is used to generate a programmable pulse-width. The first mono stable 74LS123(A) generates a pulse from the trigger input available during ringing

The circuit provides automatic switching on of a lamp during darkness. The lamp can be battery powered to provide light during power failure or load shedding. This avoids delay in attending to a call. The light switches off automatically after a programmable time period and it needs no attention at all

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# CHAPTER 1

## INTRODUCTION

### 1.1: Background

Lately, idea for 'Smart Home' concept is accepted by most of the family in world. But in Malaysia, many people don't care about home security. Even though it is important to make sure our life secure. As an alternative, we try to implement one of the smart home concepts that we called 'Smart Phone Light'.

Smart phone light is a system that we can implement to put in our smart home concept. It is operate when it detects a ringing from the phone. The circuit is normally located at the dark place such as our lovely bedroom. When it detected the ringing, the circuit will operate and as the result, the lamp will 'on'. So, we can easily find where is our telephone is located.

This design is simple, easy and reliable to install and dismantle. So, we will enjoy while using this project at home.