

CHAPTER 1

INTRODUCTION

1.1 Background and Problem Statement

Automatic Electrical Failure Detection project is to enable the building of a fully control switch to solve the electrical failure problem by using wireless to control it. Easy to repair of electrical failures in the building for the most common of which is failure of the high current or short circuit and any condition will make the fault at electrical devices [1].

Previously is going to planed upgrade of the building electrical system to automatic electrical failure detection system using wireless control and monitoring by Personal Computer (PC). The distribution system is to improve service reliability and personnel safety. Electrical upgrade projects which consist of replacement of obsolete cables, switches, and electrical devices with efficient equipment, built with the most up to date technology available in the industry and also planned service electrical connections for new buildings and facilities that are opening. This can be done by providing an electrical devices location and replace it in the short time. The installation of a new electrical device will also allow for increased reliability to perform the necessary maintenance into the future.

1.2 Objective:

The following are the objective of this project in no particular order:

- To make easy control situation when happen electrical failure.
- To control and monitor the situation when happen electrical failure.
- To cost down the maintenance by using automatic control with wireless communication.

1.3 Scope

There are of course some limitations to this project and the scope had been narrowed into the following:

- Analyze current and send it back to PC based station via Radio Frequency signal to control the switching from place A to place B.

1.4 Organization of the Thesis

This thesis is organized into five chapters.

- Chapter 1 provides an introduction to the Automatic Electrical Failure Detection, objective, scope of work, and an outline of the thesis.
- Chapter 2 is a literature review where focuses on the situation and method to the electrical failure system, Basic function, and problems encountered during the electrical failure happen. Described the theory of the electrical failure processes and characterization techniques.
- Chapter 3, the construction of the model of the system and the procedure for this work has been elaborated in detail. This chapter will cover all the hardware and software processes involved.

- Chapter 4 focuses on implementation and result. In this chapter, testing results are given. Here, interpretation is made based on the observation of the electrical failure analysis.
- Chapter 5 focus on the summary, conclusion and a recommendation.
- Chapter 6 business planning is conducted for develop and implement a well defined business strategy.