CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Taken place nearly every year during monsoon season, flood, a regular natural disaster in Malaysia, caused devastation on life and properties. A lot of houses, bridges, roads, crops, automobiles and other facilities were badly damaged. This phenomenon hence brings a nightmare to whom experienced it. Government are required to put a lot of cost and effort to repair the devastation. Although the authorities have taken action to solve this circumstances, such as enhanced the drainage system in critical area, the rate of devastation increases as the year pass by.

A few research has been conducted on flood mechanics and monitoring system. However, the device that can predict the flood, yet still on papers. In developed countries, such device were already implemented as flood monitoring system, however was not apply in Malaysia due to high cost. Some of the device were designed to detect the presence of water in-house, a simple, mostly cheap, wired and send SMS to the user. By using such system, only registered user can obtain the notification message while others
might not know about the water rising.

Real Time Flood Detection & Monitoring System with Wireless Network Sensors is an Infrared based system that send alert in the form of alarm to Department of Irrigation and Drainage (DoID) whenever the device detect rising of the water level in the river in real time. The system then predict water rising pattern based on the time the sensor detect the water.

1.2 PROBLEM STATEMENT

• Lack of efficient device to trigger flood alert
• Department of Irrigation and Drainage (DoID) could not predict when will the flood happen whether late at night or in a day
• The existing product are expensive, flimsy and wired, which is not suitable outdoor.

1.3 OBJECTIVE

• To develop a system for water depth measurement purpose.
• To collect water depth from river in real time
• To store the water depth that useful for flood prediction in a database.

1.4 SCOPE

Scope of the system will be:
I. Department of Irrigation and Drainage (DoID)
II. Flood researchers
III. Public Authorities (Fireman, RELA etc)
IV. Pahang River

The Department of Irrigation and Drainage will receive data and alert from the device. The DoID will also control the central processing of the data. Therefore, the department can gain information about the water rising pattern and anticipate when the flood might happen.

1.5 SUMMARY

To summarize, chapter 1 discussed about the idea of the whole project, problem statement, project’s scopes and objectives to be achieve. The main idea of this project is to develop a system that help unfortunate residents who live by the river to move and save their properties and document rather than be demolished by the flood. The problem is that there are no efficient device to predict and alert the residences about the rising of river water. To resolve this problem, the idea to detect the water rising, flooding time prediction is proposed, that can send alert to the authorities. With the help of this system, the personal belongings, important documents, pets, farm animals, and human life can be save.