

CHAPTER 1

INTRODUCTION

1.1 Background

Kaligarang River is identical with the river in Semarang, from upstream to downstream, this river becomes pulse for the people of Semarang City. PDAM also makes this river water as raw material for the provision of clean water, daily activities such as bathing, washing most of the community also rely on the river water. Disposal of household waste, agriculture, factory also directly to the river. This is what causes pollution, especially in the downstream areas.

While pollution is difficult to control, making water supply difficult. Lack of preparation from the authorities to process and provide clean water. Inadequate waste management becomes a serious problem for the downstream community that needs clean water. While the only source of water available comes from the river. Utilizing resources that previously worked independently to work together, making river initiation more efficient and organized. By using the Internet of Things, Arduino and supported by MySQL as a local server, PHP, and Turbidity sensor module that can present data in realtime, in order to prepare the contamination control before clean water can be enjoyed by the community. With the success of this project, the availability of clean water increases. Water monitoring plays an important role in the movement of various fields, public health and industrial sectors are also more controlled. The data presented facilitates the parties to manage and distribute clean water.

1.2 Scope

Scope based on the above background :

1. Arduino and sensor module as data collectors.

2. MySQL server as a data storage of sensor readings.
3. PHP displays data stored in MySQL server using HTTP protocol.
4. Real time monitoring water quality of Kaligarang river.

Constraints writing in the project:

1. Temperature, Humidity, Turbidity, Water level location are parameter in use
2. The terrain is difficult to obtain data.
3. Unhealthy environment will be the place for data retrieval. From that location, the sensor will monitor the water quality (Turbidity) as well as the location of the environment.

1.3 Objective

The purpose of this project is to monitoring the water quality of the Kaligarang River. Based on the data obtained, will be the basis for initiating the river. Initiation is done to improve the quality of clean water used by people around Semarang City.