

ABSTRACT

Majalaya is a low-lying area in the Bandung regency, large frequent rain that falls in the highlands Bandung caused the overflow of river water in the Majalaya area that lowland , so that causing flooding supposed damage and good losses materially or immaterially.

Along with technological advances today, for that it can be anticipated by relying on an early warning system so that it can minimize losses due to flooding. In making an early tool warning system compatible sensors are needed. Therefore in this final project an analysis is performed on several sensors by measuring how accurate the sensors are such sensors can provide water level information with several media different and with several types of water. The sensors analyzed are ultrasonic sensors type SRF-08, then lidar with type VL53L0X, and infrared sensor with type SHARP GP2Y0A21YK. The results of this thesis research are to determine sensors that are able to support an early warning flood system, so that of the three sensors that have been analyzed, sensors that are able to measure, have a performance that supports the early warning system of floods, and provide accurate information about water levels in real- time wherever and whenever. The results of the final project for each sensor in the experiments performed have varied results. Experiments carried out on two clean and dirty water media were given different results, the highest average accuracy value of the sensor in detecting water levels up to 2 meters was SRF-08 up to 90

Keywords: Water level sensors, early warning system, SRF08, VL53L0X, GP2Y0A21YK.