

Abstract

Based on data from Nasional Disaster Management Agency or BNPB every year there is still a lot of victims drifting or drowning in rivers. This is because most of the victims do not know about the water discharge and the depth of the river. There are many ways to minimize the victim, such as installing a warning board and installing barriers on the banks of rivers. To solve the problem of many victims, a tool is required to give river status warnings and display in detail the current state of the river. In this final project, measurement tools were used to provide information and river status about water discharge and river depth in real time and easily accessible to the community. The device implementation uses two main sensors, namely: a waterflow sensor to calculate the water discharge and ultrasonic sensors to calculate the depth of the river. The result of measuring both sensors will be the input parameter that will be further processed using the fuzzy logic method, resulting in a river status output. The output can be monitored via the web and the LCD on the measurement device. After testing, the results of ultrasonic sensors have a range of errors of 5 – 6 cm. the result of the waterflow sensor accuracy on the master device are 79,75% and on the client device is 84%.

Keywords: drifting, drowning, discharge, depth, fuzzy logic.