

ABSTRACT

Indonesia is a country that is very prone to natural disasters, one of which is the earthquake disaster. This disaster is one of the disasters that can have a very large impact. But the disaster should be able to reduce the number of losses. By preventing secondary disasters caused by the earthquake, such as fire due to gas leakage, loss of important data such as data on stock market price movements, and more. For preventive efforts in dealing with earthquake after a secondary disaster, we can provide early warning when an earthquake occurs so that we can evacuate as soon as possible.

In this thesis, the researchers designed an early warning system against earthquakes, where the sensor used was OMRON D7S. This research was conducted with a comparison tool namely BMKG's Intensity meter, namely MEISEI G401 with an accuracy value of 74.32%. From the testing that has been done, the time delay in sending data is greatly influenced by the state of the surrounding environment. Data is sent and stored to an SQL-based database, with an average delivery delay of 1.7 seconds. This system successfully provides an early warning using the buzzer alarm as desired. The percentage of success of the buzzer turns on as desired is 100%.

Keywords: Triangulation, Earthquake, Vibration Sensor, Earthquake Intensity