

## **ABSTRACT**

Indonesia, an archipelago country, is resting on three plates of ten plates that formed earth's crust. These three plates are Indonesia-Australia plate, Eurasia, plate, and Pacific plate. The plate's movement can cause high scaled earth quake. If the earth quake emerged in the shallow sea, that will cause tsunami.

On the last two years, the earth quakes have happened thousands times. Some of them caused tsunamis with many victims, like in Aceh, Nias, Pangandaran, and Cilacap. Anticipating following disasters, Indonesia has implemented a new system called Tsunami Early Warning System since December 2005. This new system has implemented in Sibolga North Sumatera, Padang West Sumatera, Sabang Naggroe Aceh Darussalam, and Benoa Bali. Tide gauge, an instrument to measure tidal movement, is a part of this system.

This final project is a studying implementation for a new Indonesia Tsunami Early Warning System. The focus point is about a tide gauge instrument that installed in Padang beach West Sumatera, and also observed about performances of integrated communication network in this system. This final project resolution is to give alternative solution for implementing the communication system.