

## ABSTRACT

Indonesia is a country of archipelago which lies between ring of fire where the center of tectonic plate meets. This geographic condition made Indonesia suffer a lot from sea bed earthquake with high tsunami potential. Despite this condition, the majority of citizen are unaware of the tsunami. In this final project titled “Simulasi Tsunami menggunakan Augmented Reality” (Tsunami Simulation using Augmented Reality) an application that will describe detailed process on how tsunami occur is built in the form of multimedia learning method using Augmented Reality (AR).

AR is a technology that is able to integrate virtual object(s) into real world environment, displaying it in real-time in the form of 3D object(s) on the mentioned environment. In AR application, users will be able to interact with the virtual object(s), which is when the users engage the virtual object(s) that will cause some effect on real-time environment. The virtual object(s) can only be recognized and integrated into real world by using marker. This virtual object(s) can be recognized by one or more marker (multiple marker).

This final project is made using C/C++.NET programming language with OpenSceneGraph to create the three-dimensional object(s). Also using ARToolkit which is the library to create Augmented Reality application. osgART is then used to combine ARToolkit tracking library with OpenSceneGraph.

***Keywords: Tsunami, Augmented Reality, osgART, OpenSceneGraph, ARToolkit, C/C++.NET***