ABSTRACT

Augmented Reality (AR) is a technology that allows users to interact with real environmant and virtual environments at the same time *(real-time). Augmented reality* teknologi has been applied in many fields. Physics lessons for many high school students are subjects that aren't easy to understand. Practicum is an activity that can provide more understanding to the subject of physics, but for practicum activity has many obstacles, that is schools do not have physics laboratories or schools have poor physical laboratory facilities.

This Augmented Reality application created using Unity and Vuforia by applying the FAST corner detection method. This aplication a media that is used to visualize pendulum motion of 3D shape and simulates pendulum motion based on GLBB theory interactively, designed using multi marker to give a more interactive impression in practicum activities virtually, so studying physics by providing interesting effects for users. Augmented reality application have been through the testing process, testing of te system at different android devices, and testing marker detection. The results of the tests performed show that each process in this application runs in accordance with the design. Testing system gives different results on android devices that have different specifications. Testing on marker detection shows the results of marker detection processes can be affected by light intensity, occlusion, distance, and detection angle. The marker detection processes of outdoor markers is faster than in the room.

Kata Kunci : Kata Kunci : *Augmented Reality, Marker, Android, Unity 3D, Laboratorium Fisika Virtual*