VISUALIZATION OF INTRODUCTION OF COMMERCIAL FLYING BASED ON AUGMENTED REALITY TECHNOLOGY IN ANDROID

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ABSTRACT

Commercial Aviation in introducing aircraft information that is used for commercial purposes using print and internet media, therefore, an application that can introduce and provide aircraft information that is equipped using Augmented Reality technology is needed. With the technology of Augmented Reality can provide real information and can be done directly with the aircraft as offered. This application was created using the Unity and Vuforia application. 3D modeling using the Google SketchUp application which is then exported to the Unity application. Testing is done to detect markers of light intensity, distance, marker size, and color. From the results of testing markers for light intensity of at least 4 lx and effective detection distance between 20 cm to 40 cm and marker size of at least 350 x 350 Pixels. The detection of markers at an inclination of 30 degrees, 60 degrees and 90 degrees gives results where the smartphone camera can only detect markers at an inclination of 60 to 90 degrees, while the color does not match the edge detection which is the basic reading technique of markers by Vuforia. This application has been successfully created by Augmented Reality in the form of 3D visualization of Commercial Aircraft as a supporting medium for commercial airplanes. This application can only be run on Android-based smartphones with a minimum version of 5.0.

Keywords: Augmented Reality, marker, 3D, visualization, AR, android, Air Plane, Commercial Aviation.