ABSTRACT

Augmented Reality is a technology that can project an object to be real in both 2 dimensional (2D) and 3 dimensional (3D) forms. In the current condition of the COVID-19 pandemic causing restrictions on public activities outside the room, an AR application was made in this final project to assist furniture companies in offering products to the public in an interactive and more attractive manner so as to increase people's purchasing power. So far, to offer furniture products, the company uses sales services, or print media such as brochures and newspaper advertisements.

This AR application is made using a marker as a trigger to display furniture products. The software used for making applications is Unity with Vuforia and for 3D objects using the Blender application.

The Furniture AR application displays table, cabinet, and sofa furniture products in 3D. From the results of testing the application system can run well, in the AR scan process the minimum distance of the marker with a smartphone camera is 10 cm and a maximum of 160 cm, with tilt angles of 30, 45, 60, and 90 degrees. Light intensity also affects the AR scan process, in bright and dim rooms the application can display furniture products, while in dark rooms it cannot be displayed. The delay value is very influential on light intensity and distance, where the smallest delay value in a bright room is 0.43s and the largest delay is 1.13s in a dim room, then the farther the distance between the marker and the smartphone, the greater the delay value. Based on the Mean Opinion Score test, the best MOS value was 4.79 for statements 2 and 5, namely "3D furniture displayed in accordance with the furniture catalog" and "The AR Furniture application is very suitable as a medium for promoting furniture products".

Keywords : Augmented Reality, 2D, 3D, Marker, Trigger, Unity, Vuforia, Blender.