

ABSTRACT

Learning media application of Optical Communication System (SKO) based on Augmented Reality (AR) technology is a learning media on Fiber to The Home (FTTH) material applied to smartphone devices with android operating system with at least Android version v.4.1. This instructional application is made for D3 student of Telecommunication Engineering at Telkom University on SKO subject with FTTH material. Based on samples that have been collected to D3 Engineering Telecommunications students force 2018/2019 who have taken SKO courses, the value of competency test for FTTH material has an average value of 46.86. With the highest score of 75 and the lowest score of 15, so it can be concluded that the students need a new invoice to support the learning process that can increase interest in learning by using interactive learning media such as learning media based on Augmented Reality technology.

In AR-based FTTH application is made using Unity applications and for 3D objects using applications that are blender and photoshop. The workings of this application is when the user directs the android camera to the target image in the form of a marker then on the user's android screen will display a 3D object, and when the user presses the 3D display then the table will display a table of information about the 3D object.

From the results of the test done the angle and the camera's optimal distance to the maker is 35o and 25 cm, and the smallest light intensity delay is 1.011 s during the day of the camera to maximally perform tracking with maximum light and based on the results of subjective tests of students obtained results from a scale of 1 to 5 that fall into either category. So concluded this FTTH application, can be used as a learner media in SKO subjects especially FTTH material

Keywords: *Fiber to The Home (FTTH), Augemented Reality, and Optical Communications System (SKO).*