

## ABSTRACT

Information about buildings in Indonesia is still very minimal. Particularly happened on the campus of Telkom University. Often we find it difficult to find the intended room in a building. Particularly extensive campus locations such as Telkom University. The number of buildings that are very large and scattered in large locations, as well as the number of floors and spaces in each building makes it difficult to find the destination. Whereas today almost everyone has a smartphone that is always connected to the internet and has a camera feature. Along with that, the development of augmented reality technology on smartphones quite rapidly. Therefore, currently the author tries to develop an operating system based augmented reality building applications that do tracking on the logo marker building at Telkom University. Detection or tracking of building marker is done by Vuforia library method and Hough Transform method.

Comparative analysis between Vuforia SDK and Hough Transform in the marker detection process yields data that Hough Transform excels in marker detection compared to Vuforia SDK. Because the Hough Transform performs detection based on the existence of the line while Vuforia is based on the point of cut, which is not all types of markers are acceptable. Based on a total of 648 experiments conducted on the Vuforia SDK and Hough Transform, the Hough Transform marker detection application with light intensity parameters, distance, and angle of view on 3 types of markers, ie single line, circle, and marker premises. Results show that HT can detect 100% marker. While Vuforia is only able to detect on markers with the point of cut / vertex only.

Keywords: Augmented reality, Vuforia SDK, Hough Transform, Marker Detection