ABSTRACT

IMPLEMENTATION OF AUGMENTED REALITY IN INTERACTIVE BROCHURES WITH FAST CORNER DETECTION ALGORITHM AND NATURAL FEATURE TRACKING

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The research is presenting the algorithm registration augmented reality-based key frame. In the app sort it, matching the features of the line base will be the principal problem. This research presents an application to display the delivery media information from a brochure by using technology AR (Augmented Reality). In the development of the media printed , generally impressed and look one way because it only can be read and sometimes the reader is not able to receive the information more especially information about brochure because there are only a few content in the brochure it. Application of this can facilitate prospective students new to obtain information about a picture forms of a campus that is owned by the Institute of Informatics and Business Darmajaya (IIB Darmajaya). With the use of technology that has been widely applied at this time Augmented Reality is the right technology to provide information to its users with an interesting, interactive, and real - time delivery. To test the detection of marker do testing test try compatibility with testing the intensity of light on the conditions outside the room and in the room with the distance between the camera on the marker are different. The result is that on some Android devices that have low specifications when the light is dim in the room the detection process is slow and the distance is too close can not process the object. By thus, the ability of detection marker on a target of the image is so influential with the conditions of light and the results of rating at a target of the image that is given Vuforia.

As for the method that will be used in the recognition pattern that is the method of Natural Feature Tracking (NFT) as a technique for tracking an object that is supported by the Library Vuforia Qualcomm. Tools that are used are Unity3D as editor. By because it was, was designed an implementation of the natural feature tracking on a brochure based augmented reality as a manifestation and utilization technologies are appropriate, useful and beneficial. The design and implementation process to detect markers in this application uses the Natural Feature Tracking method, which is the detection process by tracing the pattern's vertices on the image. Marker earlier in the sign up in advance to the website vuforia to at recognized feature and given a rating. In the method FAST Corner detection are used, discussed about what course which may affect either or worse than the implementation of Augmented Reality. For FAST is an algorithm in the introduction of objects 2D harness level brightness of an object image 2D which will be used as a marker, so that each value of the point angle pixel image that can be known by the system.

Key words   : *Augmented Reality, Marker, Natural Feature Tracking,*
                       FAST Corner detection, Vuforia