IN-APP PURCHASE SYSTEM BASED ON AUGMENTED REALITY TECHNOLOGY:A CASE STUDY IN HEROES OF SURABAYA MOBILE GAMES

Ari Kusumaningsih1, Cucun Very Angkoso2, Ubaidillah3

Informatics Engineering Department

University of Trunojoyo Madura

Bangkalan, Indonesia

ABSTRACT

The way on selling software applications today is much changed. Among all of the changes, it is the IAP (In-App Purchase) method for freemium software where users can download and use the application for free but there is a premium feature to be paid. This payment method is believed to be more effective to attract consumers than the payment / purchase made at the beginning by the consumer.When the app developer uses the app's sales option that is an “in-app purchase” then the potential profit or revenuewill be greater because the app-developer may get the revenue many times from one user. Unlike paid-apps where app developers typically only get one-timerevenue from one user for each app they have sold.Some problems with in-app purchase system in mobile games is when choosing the type of payment media for buying items as well as when making a payment when an interruption occurs in the mobile game server that played.Wepropose a solution to this problem by applying Augmented Reality technology to “in-app purchase system” so the system no longer requires internet connection to the game server so users easier for making purchases.This application is made for android smartphone, by combining the in-app purchase system of mobile games heroes of Surabaya with augmented reality using game engine unity and library AR-SDK Fuvoria. With augmented reality the app can recognize markers and interact with 3D objects from markers, as well as purchase items from scanned markers. This application can be an alternative solution for purchasing premium items that must be paid using digital money that not everyone understands and have payment media, so smartphone users who want to buy premium items in mobile games only need to buy marker card to make purchases of items to be purchased in mobile games heroes of Surabaya. From the experimental result, the app is get 96% user satisfaction from an attractive sales innovation, but the speed-performance gets only 35% of the user satisfaction level.The light and distance of markers are the key factor of successful rate in maker detection.

***Keywords:*** *Augmented Reality, In-App Purchase, Marker, Mobile Game, Payment Method*