

DEVELOPMENT OF AUGMENTED REALITY APPLICATION USING MULTI-MARKER METHOD FOR DINOSAURS INTRODUCTION

Rezaldy Ananda Putra

Computer Engineering Study Program, Faculty of Science & Technology

University of Technology Yogyakarta

Jl. Ringroad Utara Jombor Sleman Yogyakarta

E-mail : rezaldyputra277@gmail.com

ABSTRAK

This research aims to develop an augmented reality (AR)-based application utilizing a multi-marker method for introducing dinosaurs as an interactive educational medium. The application was designed for the Android platform, focusing on visualizing ancient animals from the Mesozoic era using marker-based tracking. The research methodology included data collection, concept design, system design, material collection, assembly, and testing using black-box testing. The results showed that the application can visualize 3D dinosaur models and support interactions between markers, such as animations of dinosaurs interacting with food or other dinosaurs. However, the application is limited to detecting a maximum of two markers at a time, so the third marker and subsequent markers are not processed by the system. Test results showed that the application successfully displayed objects at distances of 10–165 cm and angles of 0–45°. However, at a 90° angle and in low light conditions, the system failed to detect the markers. All features, such as habitats, interactions between dinosaurs, and interactions with food, worked as expected. The application is compatible with several types of Android devices. For further development, it is recommended that the system be able to detect more than two markers, as well as add voice narration features and compatibility with other platforms such as iOS.

Keywords: *Augmented Reality, Android, Dinosaurs, 3D Interaction, Multi-marker*