

ABSTRACT

Along with the rapid development of technology, mobile devices are undergoing a significant transformation, especially in the construction industry, where sustainability and productivity are major concerns. Augmented Reality (AR) enables interaction between the real and virtual worlds, opening up new opportunities to understand and visualize architectural designs in three-dimensional form. This research aims to incorporate the potential of AR in presenting architectural design presentations in a more interactive manner, using the Multimedia Development Life Cycle (MDLC) method, and utilizing Unity 3D, Vuforia SDK, and Google SketchUp technologies. This research applies Purposive Sampling (Judgment Sampling) and Accidental Sampling (Convenience Sampling) sampling methods for beta testing using the System Usability Scale (SUS) by involving respondents consisting of owners, managers, staff, and prospective buyers at PT Alexandria Realtindo from October 10, 2024 to November 4, 2024. The test results show that the resulting application is able to overcome the limitations of two-dimensional visualization by presenting realistic 3D models, so that users can understand design details realistically. Alpha testing using the Boundary Value Analysis (BVA) method shows that the application functions stably without constraints. Beta testing using the System Usability Scale (SUS) method resulted in an average score of 82.4 which exceeds the threshold value, falling into the “Acceptable” category in the Acceptability Ranges, with a grade scale of “B” (Good). In addition, the adjective ratings results place the app in the “Excellent” category, indicating a very positive and satisfying user experience. With these results, the ARchivetecture app has been well received by users and meets the expected standards. This application is not only an innovative solution to improve the visualization of architectural designs, but also makes a real contribution to efficiency and user satisfaction in the construction services industry.

Keywords: Architecture, AR, BVA, SUS, Visualization