

PENGEMBANGAN *VIRTUAL REALITY TOUR* PADA GEDUNG FAKULTAS DI KAMPUS REULEUET UNIVERSITAS MALIKUSSALEH BERBASIS *WEBSITE*

ABSTRAK

Perkembangan teknologi informasi di ranah pendidikan tinggi terus memicu hadirnya media publikasi kampus yang interaktif dan fleksibel. Salah satu inovasi digital yang potensial adalah *Virtual Reality* (VR) berbasis citra panorama 360°, yang memfasilitasi pemakai untuk mengeksplorasi suatu kawasan secara imersif. Meskipun Universitas Malikussaleh telah menyediakan fasilitas *Virtual Reality Tour* berbasis *website* untuk area Kampus Bukit Indah, cakupan layanan tersebut belum menjangkau kompleks gedung fakultas di Kampus Reuleuet. keterbatasan ini mengakibatkan penyampaian data spasial dan fasilitas fisik di Kampus Reuleuet kurang optimal, sehingga masyarakat umum maupun calon mahasiswa masih diwajibkan berkunjung secara langsung. Oleh sebab itu, urgensi ekspansi platform *Virtual Reality Tour* menjadi sangat vital demi memperkuat sarana informasi serta promosi institusi. Riset ini bertujuan merealisasikan sistem *Virtual Reality Tour* berbasis *website* yang mengintegrasikan visualisasi gedung-gedung fakultas Kampus Reuleuet dengan menerapkan konsep *3D Reality* memanfaatkan perangkat lunak 3DVista. Integrasi ini dirancang agar platform dapat diakses secara efisien, praktis, dan interaktif oleh pengguna. Kerangka kerja yang diterapkan mengadopsi metode *Multimedia Development Life Cycle* (MDLC), yang mencakup fase *Concept*, *Design*, *Material Collecting*, *Assembly*, *Testing*, hingga *Distribution*. Alur konstruksi aplikasi meliputi pengambilan citra panorama 360°, perancangan *tur virtual* pada 3DVista, serta penanaman sistem ke dalam kerangka kerja (*framework*) Laravel. Guna memverifikasi kinerjanya, evaluasi dilakukan lewat *Black Box Testing* untuk menguji fungsionalitas fitur, serta *User Acceptance Testing* (UAT) untuk mengukur derajat penerimaan calon pengguna. Hasil penelitian membuktikan bahwa platform *Virtual Reality Tour* berbasis web berhasil dibangun dengan baik dan sanggup menyajikan lanskap 360° gedung fakultas di Kampus Reuleuet secara dinamis. Kehadiran sistem ini memberikan kepraktisan bagi publik dalam memetakan area kampus, memperluas jangkauan transparansi informasi digital institusi, sekaligus menjadi instrumen promosi yang modern, efektif, dan menyajikan pengalaman eksplorasi visual yang menarik.

Kata Kunci: *Virtual Reality Tour*, *Virtual Reality*, 3DVista, *Website*, MDLC

**DEVELOPMENT OF VIRTUAL REALITY TOUR OF FACULTY
BUILDINGS AT THE REULEUET CAMPUS OF
MALIKUSSALEH UNIVERSITY
BASED ON THE WEBSITE**

ABSTRACT

The development of information technology in the realm of higher education continues to trigger the presence of interactive and flexible campus publication media. One potential digital innovation is Virtual Reality (VR) based on 360° panoramic imagery, which facilitates users to explore an area in an immersive manner. Although Malikussaleh University has provided a website-based Virtual Reality Tour facility for the Bukit Indah Campus area, the scope of the service has not reached the faculty building complex at the Reuleuet Campus. This limitation results in the delivery of spatial data and physical facilities at the Reuleuet Campus is not optimal, so the general public and prospective students are still required to visit directly. Therefore, the urgency of expanding the Virtual Reality Tour platform is very vital in order to strengthen information facilities and institutional promotion. This research aims to realize a website-based Virtual Reality Tour system that integrates the visualization of the buildings of the Reuleuet Campus faculty by applying the concept of 3D Reality using 3DVista software. This integration is designed to make the platform accessible efficiently, practically, and interactively by users. The framework implemented adopts the Multimedia Development Life Cycle (MDLC) method, which includes the Concept, Design, Material Collecting, Assembly, Testing, and Distribution phases. The application construction flow includes 360° panoramic imagery, designing virtual tours on 3DVista, and embedding the system into the Laravel framework. In order to verify its performance, evaluation is carried out through Black Box Testing to test the functionality of features, and User Acceptance Testing (UAT) to measure the degree of acceptance of prospective users. The results of the study prove that the web-based Virtual Reality Tour platform has been successfully built and is able to present a 360° landscape of the faculty building on the Reuleuet Campus dynamically. The presence of this system provides practicality for the public in mapping the campus area, expanding the reach of the institution's digital information transparency, as well as being a modern, effective promotional instrument, and presenting an interesting visual exploration experience.

Keywords: *Virtual Reality Tour, Virtual Reality, 3DVista, Website, MDLC*