APPLICATION OF VR TECHNOLOGY

FOR HISTORICAL ARCHITECTURE AT PATTANI, THAILAND

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ABSTRAK

Tujuan projek penyelidikan ini adalah untuk membangunkan satu halaman Web untuk Masjid Kruse, Pattani, Thailand menggunakan pendekatan Realiti Maya (VR). Pembangunan aplikasi ini melibatkan penggunaan dua teknologi Realiti Maya. Dalam fasa pertama, teknologi yang digunakan adalah Panorama VR untuk pembangunan laman *web*. Penyelidikan ini menggunakan *Quick Time Virtual Reality (QTVR)*, satu teknologi VR berasaskan fotografi yang membolehkan pengguna meneroka panorama sekeliling dan meneliti objek dengan cara memutarkan objek tersebut ke beberapa titik pandangan (*viewpoint*) menggunakan tetikus. Perisian VRWorx 2.0 digunakan untuk mencantumkan imej objek berkenaan. Fasa kedua adalah fasa pembangunan laman Web menggunakan teknologi 3D VRML. Perisian AutoCAD 2000 digunakan untuk mencipta model 2-dimensi dan perisian 3D Studio VIZ 3.0 digunakan untuk mengubah model 2D yang telah dicipta kepada objek 3-dimensi dan juga untuk menjana kod VRML bagi objek 3-dimensi yang telah dihasilkan. Akhirnya, setiap seksyen dibina menggunakan Macromedia Dreamweaver 4.0 dan animasi dihasilkan menggunakan Macromedia Flash 4.0. Hasil daripada penyelidikan ini menunjukkan bahawa teknologi dan persekitaran VR boleh dibangunkan dan digunakan pada sistem komputer berkos rendah.

ABSTRACT

The purpose of this research is to develop a home page for Kruse mosque, Pattani, Thailand using Virtual Reality (VR) approach. The development of the application involves two VR technologies. The first is the development of home page using Panorama VR technology. The research uses QuickTime Virtual Reality (QTVR), a photography-based VR that enables a user to explore panoramic spaces and examine objects by rotating them to any viewpoint using a computer mouse. The authoring software like VR Worx 2.0 was used to stitch the images. The second phase, which is the development of home page using 3D VRML technology. The AutoCAD 2000 was used to create 2D model, and 3D Studio VIZ 3.0 was used to transform 2D model to 3D object and also to compile 3D object to 3D VRML. The last this research composed each section by Macromedia Dreamwever 4.0 and created animations by Macromedia Flash 4.0. The result of this research has shown that in the world of VR technology could be almost developed and applied our environments at a lower cost desktop computer system.

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CHAPTER 1: INTRODUCTION

Virtual Reality (VR), a technology that began in military and university laboratories more than 20 years ago, may be called Artificial Reality, Cyberspace, or Synthetic Reality. VR is a computer-created sensory experience that allows a participant to believe and barely distinguish a "virtual" experience from a real one. VR uses computer graphics, sounds, and images to reproduce electronic versions of real-life situations.

Virtual Reality is not a computer, but a technology that uses computerized clothing to synthesize reality. Most current VR systems provide only visual experiences created by computer-assisted design (CAD) or other graphics/animation systems, but researchers are working on interface devices that add sound and touch. Eventually, VR may be delivered through direct computer-to-brain connections.

Figure 1-1.Vietnam war simulation at the Atlanta Veterans Administration Hospital.

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