UNIVERSITI TEKNOLOGI MARA

VISUALIZATION AND PRESERVATION OF CULTURAL HERITAGE USING CLOSE RANGE PHOTOGRAMMETRY AT MASJID SULTAN BRUNEI

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of the requirements for the degree of
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AUTHOR'S DECLARATION

I declare that the work in this dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA. The dissertation is original and it is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

To make visualization for image processing of heritage building is the most important since the building is built for the past through years. The conservation of historical building being important parts of cultural heritage since most of the heritage is damaged caused by human factor, natural tragedy, animal and environment itself. The preservation is needed for purposes of identification, protection, interpretation, and historical building for conservation for the next generation. The 3D model method gives a good and photo-realistic appearance to preserve the building. In this study, the technique of Digital Close Range Photogrammetry (DCRP) is used since it currently effective system because it is very easy to use, simple digital image obtained by handheld phone camera, also reduce cost and time effectiveness. The study area was located at Masjid Sultan Brunei, Pasir Mas, Kelantan. This project will view the introduction, methodology, measurement method, 3D modelling, result analysis and conclusion were presented. Besides, the software include in this project are Photomodeler Scanner Software, Sketch-up software, Topcon Tools and AutoCAD. The most useful and important software are Sketch-Up and Photomodeler because by using sketch-up, the 3D model of LOD II can be produce while Photomodeler Scanner was produce 3D model for façade building. The final output is producing a 3D image model and find out the height and length of the building by transferring GPS information. The GPS method was apply is relative static method.

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