

**UNIVERSITI TEKNOLOGI MARA**

**THE ASSESSMENT OF MAP  
GENERATED FROM UNMANNED  
AERIAL VEHICLE (UAV) IMAGES  
USING BUILT-IN GPS IN CAMERA  
AS A REFERENCE COORDINATE**

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Thesis submitted in fulfillment  
of the requirements for the degree of  
**Bachelor of Surveying Science and Geomatic  
(Hons)**

**Faculty of Architecture, Planning and Surveying**

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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. It is original and 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**

Unmanned Aerial Vehicle (UAV) is an aircraft without needing a pilot on board. It can be controlled remotely or autonomously fly according to the program which fixed by human. The output produced is as precise as the conventional survey because it offers centimetre accuracy. Besides, there are variety of useful information about the ground surface which can be extracted without having to spend a lot of time. This information can be generated based on the selection of parameters chosen during flight planning and data processing. The aim for this project is to determine the accuracy assessment of map created from UAV images using built-in GPS in camera as a reference coordinates. Study area chosen for this project is in UiTM Perlis. The methodology applied for this project is the UAV Photogrammetry module where it includes processing of images by using Agisoft PhotoScan software after image acquisition from flying the drone. There are two method of processing which are direct geo-referencing and geo-referencing by using GNSS values. The analysis was carried out as the indication that Ground Control Point (GCP) is necessary in enhancing the accuracy of the output. These analysis was shown in both qualitative and quantitative in order to support the importance of utilizing GCP in this survey. According to the result obtained, the output produced without applying GCP is precise but not accurate as it does not in the right position.

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